



Service Manual

Service Manual

KM500



Model : KM500



Table of Contents

1. Introduction	5	4.14 Ear-Mic Headset MIC Trouble Shooting.....	90
1.1 Purpose.....	5	4.15 Ear-Mic Headset MIC Trouble Shooting.....	91
1.2. Regulatory Information.....	5	4.16 FM-Radio Trouble Shooting.....	92
1.3 Abbreviations	7	4.17 Transflash Trouble Shooting.....	93
2. General Performance.....	8	4.18 Main Key Backlight LED Trouble Shooting.....	95
2.1 Product Name	8	4.19 Slide Key Backlight LED Trouble Shooting.....	97
2.2 Supporting Standard	8	4.20 Vibrator Trouble Shooting	98
2.3 Main Parts: GSM Solution.....	8	5. Download.....	100
2.4 HW Feature.....	9	5.1 Download Software.....	100
2.5 S/W Features	11	5.2 The Environment of Downloading Software.....	100
3. HW Circuit Description.....	14	5.3 Download Procedure	102
3.1 General Description	14	6. Block Diagram.....	107
3.2 RF Part.....	14	7. CIRCUIT DIAGRAM	109
3.3 Digital Baseband.....	20	8. BGA IC Pin Check	121
3.4 Multimedia IC	27	9. PCB LAYOUT	141
3.5 Analog Baseband.....	30	10. Calibration	151
3.6 Bluetooth Interface.....	36	10.1 What's the Rx Calibration?.....	151
3.7 Function difference	40	10.2 What's the Tx Calibration?	151
3.8 BOM difference	41	10.3 Calibration program - HOT_KIMCHI	152
4. Trouble Shooting	42	11. Engineering Mode	157
4.1 RF Part Technical Brief.....	43	12. EXPLODED VIEW & REPLACEMENT PART LIST	161
4.2 RF Part Trouble shooting.....	46	12.1 EXPLODED VIEW	161
4.3 Bluetooth Trouble Shooting	54	12.2 Replacement Parts <Mechanic component>.....	163
4.4 Baseband Part Troubleshooting	57	<Main component>	165
4.5 LCD Display Trouble shooting	65	12.3 Accessory	183
4.6 Camera Trouble Shooting.....	72		
4.7 Flash LED Trouble Shooting.....	76		
4.8 SIM Detect Trouble Shooting.....	79		
4.9 Slide Up/Down Trouble Shooting.....	82		
4.10 Speaker/Receiver Trouble Shooting (Common Path).....	84		
4.11 MIC Trouble Shooting	86		
4.12 Ear-Mic Jack Detection Trouble Shooting.....	88		
4.13 Ear-Mic Hook Detection Trouble Shooting.....	89		

1. Introduction

1.1 Purpose

This manual provides the information necessary to repair, calibration, description and download the features of the KM500.

1.2 Regulatory Information

A. Security

Toll fraud, the unauthorized use of telecommunications system by an unauthorized part (for example, persons other than your company's employees, agents, subcontractors, or person working on your company's behalf) can result in substantial additional charges you're your telecommunications services. System users are responsible for the security of own system. There are may be risks of toll fraud associated with your telecommunications system. System users are responsible for programming and configuring the equipment to prevent unauthorized use. LGE does not warrant that this product is immune from the above case but will prevent unauthorized use of common-carrier telecommunication service of facilities accessed through or connected to it. LGE will not be responsible for any charges that result from such unauthorized use.

B. Incidence of Harm

If a telephone company determines that the equipment provided to customer is faulty and possibly causing harm or interruption in service to the telephone network, it should disconnect telephone service until repair can be done. A telephone company may temporarily disconnect service as long as repair is not done.

C. Changes in Service

A local telephone company may make changes in its communications facilities or procedure. If these changes could reasonably be expected to affect the use of the KM500 or compatibility with the network, the telephone company is required to give advanced written notice to the user, allowing the user to take appropriate steps to maintain telephone service.

D. Maintenance Limitations

Maintenance limitations on the KM500 must be performed only by the LGE or its authorized agent.

The user may not make any changes and/or repairs expect as specifically noted in this manual.

Therefore, note that unauthorized alternations or repair may affect the regulatory status of the system and may void any remaining warranty.

E. Notice of Radiated Emissions

The KM500 complies with rules regarding radiation and radio frequency emission as defined by local regulatory agencies. In accordance with these agencies, you may be required to provide information such as the following to the end user.

1. Introduction

F. Pictures


The pictures in this manual are for illustrative purposes only; your actual hardware may look slightly different.

G. Interference and Attenuation

An KM500 may interfere with sensitive laboratory equipment, medical equipment, etc. Interference from unsuppressed engines or electric motors may cause problems.

H. Electrostatic Sensitive Devices

ATTENTION

Boards, which contain Electrostatic Sensitive Device (ESD), are indicated by the  Following information is ESD handling:

- Service personnel should ground themselves by using a wrist strap when exchange system boards.
- When repairs are made to a system board, they should spread the floor with anti-static mat which is also grounded.
- Use a suitable, grounded soldering iron.
- Keep sensitive parts in these protective packages until these are used.
- When returning system boards or parts like EEPROM to the factory, use the protective package as described.

1.3 Abbreviations

For the purposes of this manual, following abbreviations apply:

APC	Automatic Power Control
BB	KM500
BER	Bit Error Ratio
CC-CV	Constant Current - Constant Voltage
DAC	Digital to Analog Converter
DCS	Digital Communication System
dBm	dB relative to 1 milliwatt
DSP	Digital Signal Processing
EEPROM	Electrical Erasable Programmable Read-Only Memory
EL	Electroluminescence
ESD	Electrostatic Discharge
FPCB	Flexible Printed Circuit Board
GMSK	Gaussian Minimum Shift Keying
GPB	General Purpose Interface Bus
GSM	Global System for Mobile Communications
IPUI	International Portable User Identity
IF	Intermediate Frequency
LCD	Liquid Crystal Display
LDO	Low Drop Output
LED	Light Emitting Diode
OPLL	Offset Phase Locked Loop
PAM	Power Amplifier Module
PCB	Printed Circuit Board
PGA	Programmable Gain Amplifier
PLL	Phase Locked Loop
PSTN	Public Switched Telephone Network
RF	Radio Frequency
RLR	Receiving Loudness Rating
RMS	Root Mean Square
RTC	Real Time Clock
FEM	Front End Module
SIM	Subscriber Identity Module
SLR	Sending Loudness Rating
SRAM	Static Random Access Memory
STMR	Side Tone Masking Rating
TA	Travel Adapter
TDD	Time Division Duplex
TDMA	Time Division Multiple Access
UART	Universal Asynchronous Receiver/Transmitter
VCO	Voltage Controlled Oscillator
VCTCXO	Voltage Control Temperature Compensated Crystal Oscillator
WAP	Wireless Application Protocol

2. General Performance

2. General Performance

2.1 Product Name

KM500: GPRS Class 10 / EDGE Class 10

2.2 Supporting Standard

Item	Feature	Comment
Supporting Standard	GSM900/DCS1800/PCS1900 with seamless handover Phase 2+(include AMR) SIM Toolkit: Class 1, 2, 3, A-E	
Frequency Range	GSM900 TX : 880 - 915 MHz GSM900 RX : 925 - 960 MHz DCS1800 TX : 1710 - 1785 MHz DCS1800 RX : 1805 - 1880 MHz PCS1900 TX : 1850 - 1910 MHz PCS1900 RX : 1930 - 1990 MHz	
Application Standard	WAP 2.0, JAVA 2.0	

2.3 Main Parts: GSM Solution

Item	Part Name	Comment
Digital Baseband	Neptune (D761811BZVL): TI	
Analog Baseband	Triton (TWL3029): TI	
RF Chip	B6PLD: RENESAS	

2. General Performance

2.4 HW Feature

Item		Feature	Comment
Form Factor		Slide	
Battery		1) Capacity Standard: Li-Ion, 800mAh	
		2) Packing Type: Soft Pack	
Size		Standard: 99.9 x 48 x 14.5 mm	
Weight		102 g	With Battery
Volume		66.5 cc	
PCB		Staggered 10Layers , 0.8t	
Stand by time		250 hrs	@ Paging Period 5
Charging time		3 hrs	@ Power Off / 800mAh
Talk time		Min: 3.0 hrs @ Power Level 7	@ EGSM / 800mAh
RX sensitivity		GSM900: -105 dBm	
		DCS 1800: -105 dBm	
		PCS 1900: -105 dBm	
TX output power	GSM/ GPRS	GSM900: 32 dBm	Class4 (GSM900)
		DCS 1800: 29.5 dBm	Class1 (PCS)
		PCS 1900: 30 dBm	Class1 (DCS)
	EDGE	GSM900: 27 dBm	E2 (GSM900)
		DCS 1800: 26 dBm	E2 (PCS)
		PCS 1900: 26 dBm	E2 (DCS)
GPRS compatibility		GPRS Class 10	
EDGE compatibility		EDGE Class 10	
SIM card type		Plug-In SIM	
		3V /1.8V	
Display		Main LCD	
		262K Color TFT (240 x 320)	
		Backlight : White LED	
Built-in Camera		2M CMOS Camera	One button access

2. General Performance

Item	Feature	Comment
Status Indicator	None	
Keypad	Alphanumeric Key: 12 Function Key: 14 Side Key: 4 Total No of Keys: 30	Function Key: 4 Key Navigation, OK, REW, PLAY, FF, MP3, F1, F2, CLR, SND, END Side Key: Volume up/down, CAM, HOLD
ANT	Main: Internal Fixed Type Blue tooth: Internal Fixed Type	
System connector	18 Pin	
Ear Phone Jack	18pin / 4 Pole, Stereo	
PC synchronization	Yes	
Memory	NAND Flash: 1Gbit	
	SDRAM: 512Mbit	
Speech coding	FR, EFR, HR, AMR	
Data & Fax	Built in Data & Fax support	
Vibrator	Built in Vibrator	
Blue Tooth	V2.0, HSP, HFP, OPP, FTP(server), BPP, A2DP, AVRCP	
Wi-Fi	802.11b, 802.11g	
MIDI(for Buzzer Function)	SW Decoded 64Poly	
Music Player	MP3/ AAC/AAC+	With Graphic EQ
Camcorder	MPEG4, H.263, H.264	
Voice Recording	Yes	
Speaker Phone mode Support	Yes	
Travel Adapter	Yes	
CDROM	Yes	
Stereo Headset	Yes	Optional
Data Cable	Yes	Optional
T-Flash (External Memory)	Yes	Optional

2. General Performance

2.5 S/W Features

Item	Feature	Comment
RSSI	0 ~ 7 Levels	
Battery Charging	0 ~ 3 Levels	
Key Volume	0 ~ 5 Level	
Audio Volume	1 ~ 5 Level	
Time / Date Display	Yes	NITZ
Multi-Language	Yes	English / French
Quick Access Mode	Phone Book / Message / Camera / My Stuff / Favorite	
PC Sync	Schedule / Phonebook / MEMO / SMS / Download(Photo, file)	
Speed Dial	Yes (2~9)	Voice mail center -> 1 key
Profile	Yes	
CLIP / CLIR	Yes (different melody)	
Phone Book	4 Numbers + 1 Memo + 1 e-mail + Group Select + Picture	Total 1000 Member
Last Dial Number	Yes (40)	
Last Received Number	Yes (40)	
Last Missed Number	Yes (40)	
Search by Number/Name	Name only	
Group	7	Possible Rename
Fixed Dial Number	Yes	
Service Dial Number	Yes	
Own Number	Yes	
Voice Memo	Yes	
Call Reminder	Yes	
Network Selection	Automatic	
Mute	Yes	
Call Divert	Yes	
Call Barring	Yes	
Call Charge (AoC)	No	No for Cingular

2. General Performance

Item	Feature	Comment
Call Duration	Yes	
SMS (EMS)	100 (10)	EMS: Release4 (Except Text align)
SMS Over GPRS	Yes	
EMS Melody / Picture Send / Receive / Save	Yes	
MMS MPEG4 / Send / Receive / Save	Yes	
Long Message	MAX 925 Characters	
Cell Broadcast	Yes	
Download	Over the WAP	
Game	YES	
Calendar	Yes	
Memo	50	
Unit Convert	Currency/Area/Length/Volume/Weight/Temperature/Velocity	
Tip Calculator	No	
Wall Paper	Yes	Default 5ea
WAP Browser	Over WAP 2.0	Up Brower Obigo Q-line
Download Melody / Wallpaper	Yes	Over WAP
SIM Lock	Yes	Operator Dependent
SIM Toolkit	Class 1, 2, 3, A-E	
MMS	Yes	Open wave MMS Client
EONS	Yes	
CPHS	Yes	V4.2
ENS	Yes	
Camera	Yes	2M F/F / Digital Zoom: x4
JAVA	Yes	CLDC V1.1 / MIDP V2.0 Download Over WAP
Voice Dial	No	

2. General Performance

Item	Feature	Comment
IrDa	No	
Blue tooth	Yes	V2.0 HSP, HFP, OPP, FTP(server), BPP, A2DP, AVRCP
GPRS	Yes	Class 10
EDGE	Yes	Class 10
Hold / Retrieve	Yes	
Conference Call	Yes	Max. 6
DTMF	Yes	
Memo pad	Yes	
TTY	No	
AMR	Yes	
Sync ML	No	
IM	No	
Email	Yes	

Function difference

	RF Band	GSM900/ DCS1800			GSM850/ PCS1900
Design	Market	Europe	Asia / CIS	Latin America	Latin America

3.2.1.1 Baseband PGA/Low pass Filter Specifications

The baseband programmable amplifier comprises one stage with variable gain followed by a fixed gain amplifier. The overall gain control range is 36dB with 6dB Steps. The filtering is provided by a single R/C low pass filter with an on-chip capacitor followed by on-chip Chebychev low pass filters. The filters have been specified to achieve maximal group delay flatness in the pass-band combined with the required levels of suppression of interfering signals. The distribution of the gain and filtering has been designed to ensure that the receiver does not compress under blocking conditions. The final fixed gain amplifier is included to match the on-chip levels to the input dynamic range of the ADC.

3.2.1.2 DC offset auto-calibration system

B6PLD implements a system for cancelling the DC offsets in the baseband programmable gain amplifiers(PGA). This prevents a small DC offset at the input giving a large DC offset at the output, even at high gain settings. When the B6PLD receiver is performing an auto-calibration, the sequencer cancels the offsets locally around the PGA, then the Digital filter. The system includes switches to short out the signal path whilst the cancellation is occurring. The switches are opened in sequence as the calibration progresses. For PGA the A/D converter system employs a successive approximation technique and achieves 6 bit resolution. The PGA stage has an associated 6 bit current DAC which cancels the DC offset at the output. The sequencer ensures that on-chip filters have sufficient time to settle before applying correction in the next digital offset cancellation stage.

3. HW Circuit Description

3.2.2 Transmitter part

The B6PLD transmitter is capable of both GMSK and 8-PSK modulation, to support for conventional GSM and EDGE. B6PLD integrates all loop filters to configure both PM loop and AM loop. See block diagram below.

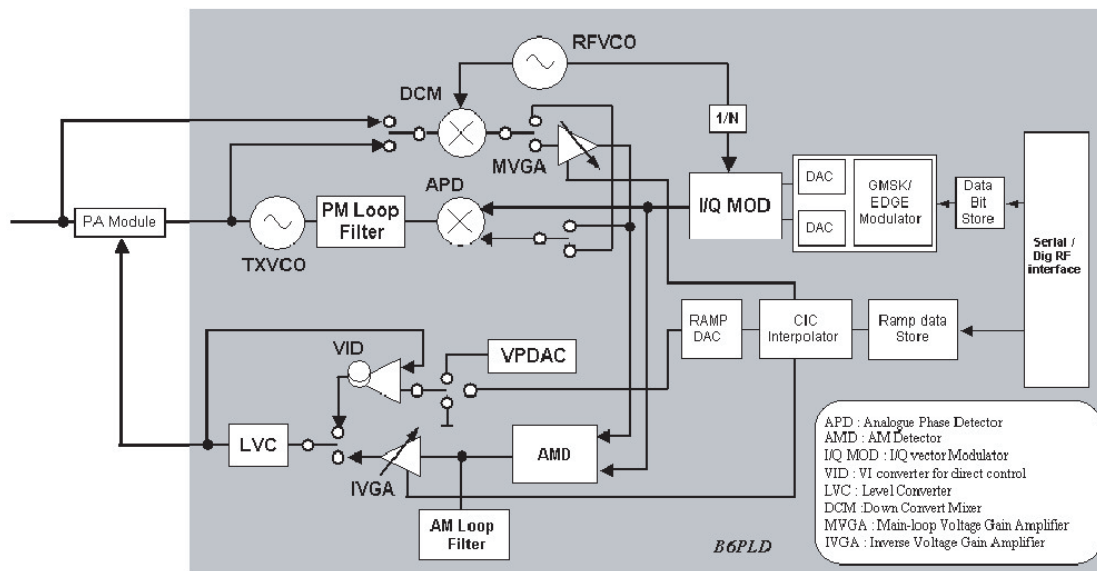


Fig. Simplified Block diagram for Tx part

3.2.2.1 Polar Loop Structure

Three main functions are identified in the transmitter architecture; I/Q vector modulation at IF frequency, amplitude and phase loop at IF/RF frequencies and power amplification.

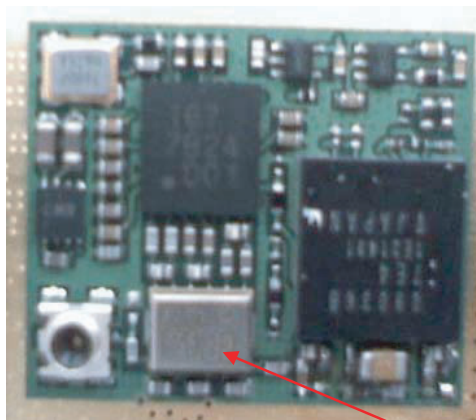
3.2.3 RF Synthesizer

RF Synthesiser

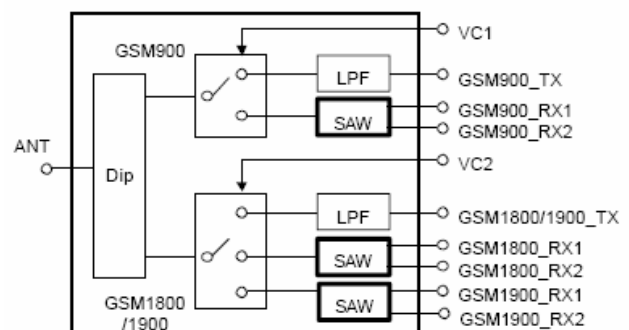
Operating frequency	Rx mode	GSM850	3476.8MHz ~ 3575.2MHz
		GSM900	3700.8MHz ~ 3839.2MHz
		DCS1800	3610.4MHz ~ 3759.6MHz
		PCS1900	3860.4MHz ~ 3979.6MHz
	Tx mode ([IF1:IF0]=[0:1])	GSM850	3626.48MHz ~ 3734.72MHz
		GSM900	3872.88MHz ~ 4025.12MHz
		DCS1800	3583.27MHz ~ 3739.58MHz
		PCS1900	3876.60MHz ~ 4001.48MHz
	Tx mode ([IF1:IF0]=[1:0])	GSM850	3596.50MHz ~ 3703.85MHz
		GSM900	3840.87MHz ~ 3991.85MHz
		DCS1800	3569.11MHz ~ 3724.80MHz
		PCS1900	3861.28MHz ~ 3985.66MHz
	Tx mode ([IF1:IF0]=[1:1])	GSM850	3571.53MHz ~ 3678.13MHz
		GSM900	3814.20MHz ~ 3964.13MHz
		DCS1800	3557.22MHz ~ 3712.38MHz
		PCS1900	3848.42MHz ~ 3972.38MHz

3.2.4 Front End Module Specification

3.2.4.1 Block Diagram and Internal Matching Condition



FEM



3. HW Circuit Description

3.2.4.2 Logic Table for Selection

	Vc1	Vc2	Current
GSM900_Tx	2.6V	0V	8.0 mA
GSM1800 / 1900_Tx	0V	2.6V	8.0 mA
GSM900_Rx	0V	0V	<0.5 μ A
GSM1800_Rx	0V	0V	<0.5 μ A
GSM1900_Rx	0V	0V	<0.5 μ A

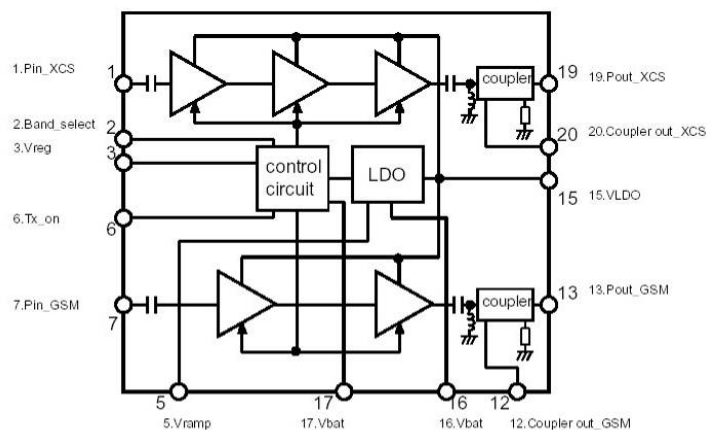
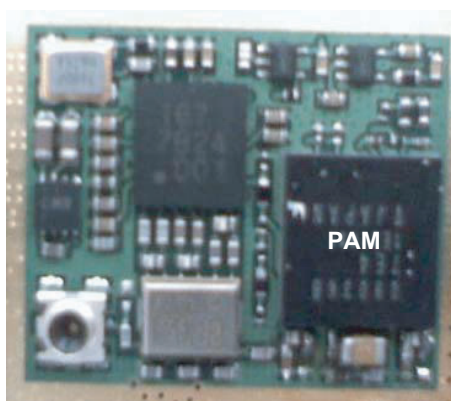
<Table> Band SW Logic Table

3.2.5 Power Amplifier Module for Quad-band GSM/GPRS/EDGE

3.2.5.1 PAM Specification

- Quad band GSM, GPRS & Polar Loop EDGE Amplifier
- For 3.5V nominal operation
- Built-in LDO circuit
- GPRS Class 12 operation compatible
- Integrated directional coupler

3.2.5.2 Circuit Diagram and peripheral components



3.2.6 Digital Core

3.2.6.1 Digital Interface Block Diagram

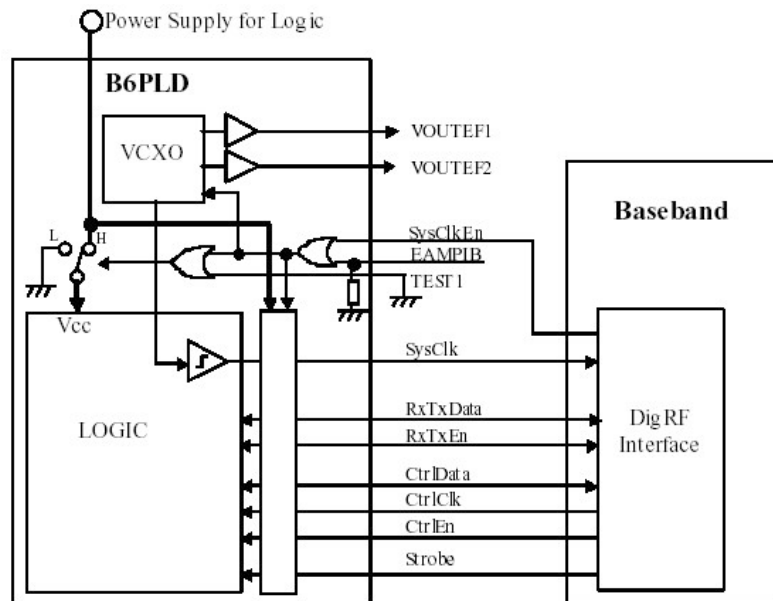


Fig. 1-1 Digital Interface Block Diagram

3.2.6.1 Control system and digital interface

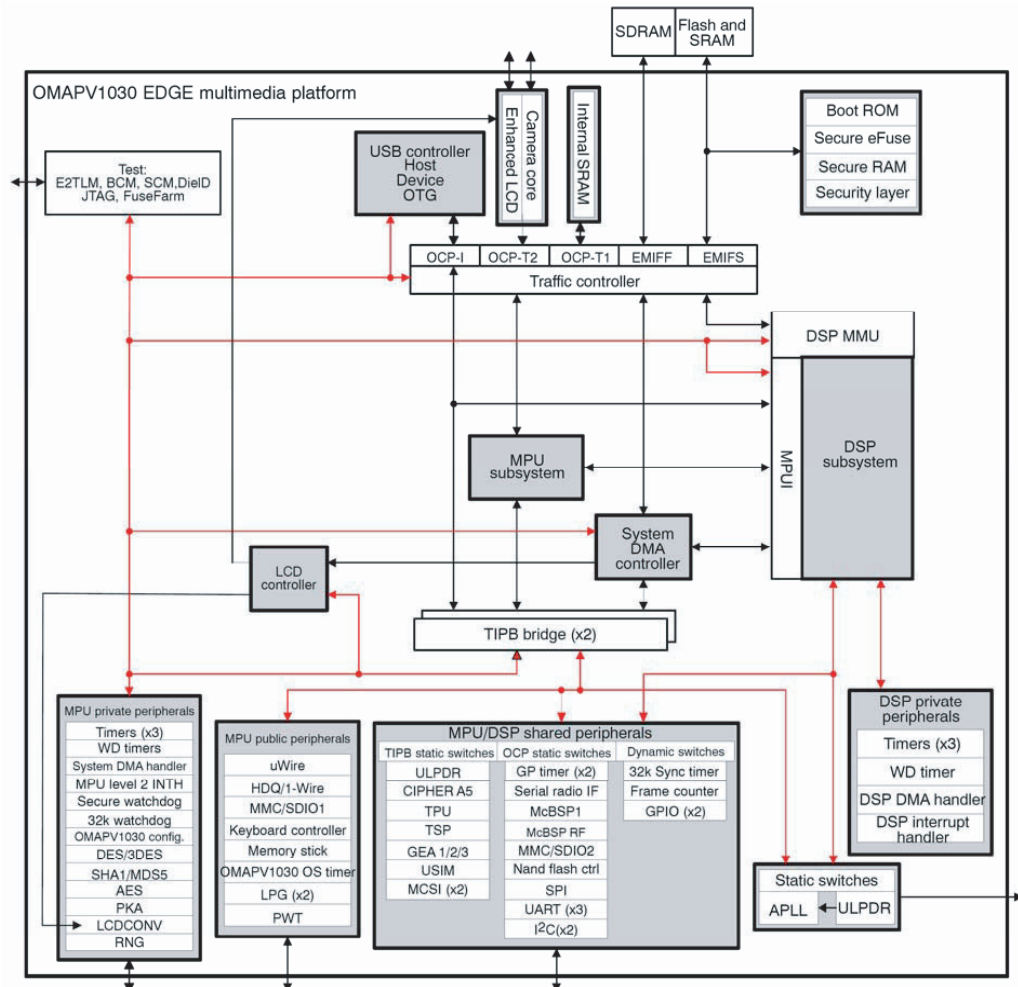
The B6PLD is a RF transceiver IC for GSM900, DCS1800 and PCS1900 quad band cellular system, and incorporates EDGE transceiver capability. The B6PLD has a digital interface connection to the baseband processor. This interface complies with the digital interface specification DigRF standard v112.

The digital interface consists of two separate interface connections; (1) the control interface, (2) the data interface, and a system clock on/off control signal and a precise timing signal. These are realized by eight signal lines in B6PLD(Look at Fig1.1 above)

- The control interface is used to configure the B6PLD for RX and TX operation, transfers of control data for several built-in circuits, and for triggering the events. The control interface comprise a bi-directional 3-wire serial interface with the three signal lines CtrlData, CtrlEn and CtrlClk accessing the control registers in B6PLD by transferring the control words.
- The data interface is used to transfer transmit modulation symbols and receive IQ-sampling data. The data interface comprises a single serial bus with the three signal lines RxTxData, RxTxEn and SysClk. The SysClk is used for system clock to baseband.
- The SsClkEn signal enables the SysClk output and powers the 26MHz oscillator on. When the SysClkEn is negated, the SysClk is held low, and if the TEST1 pin is low by the default settings, the logic power supply by typical 1.8 volts to the internal core logic circuits is also switched off.

3. HW Circuit Description

3.3 Digital Baseband



<Fig.6> OMAPV1030 Block Diagram

3.3.1 General description

The OMAPV1030 E-GPRS multimedia device belongs to the Texas Instruments OMAP-Vox_ processors family. It combines both a modem engine and an application engine. Memory and CPU resources are shared between modem and application processing.

The OMAPV1030 chip is based on the OMAP3.4 architecture and integrates two processor subsystems:

- An MPU subsystem based on an ARM926EJ-S
- A DSP subsystem based on a UMA 2.6 architecture integrating a C55x DSP core

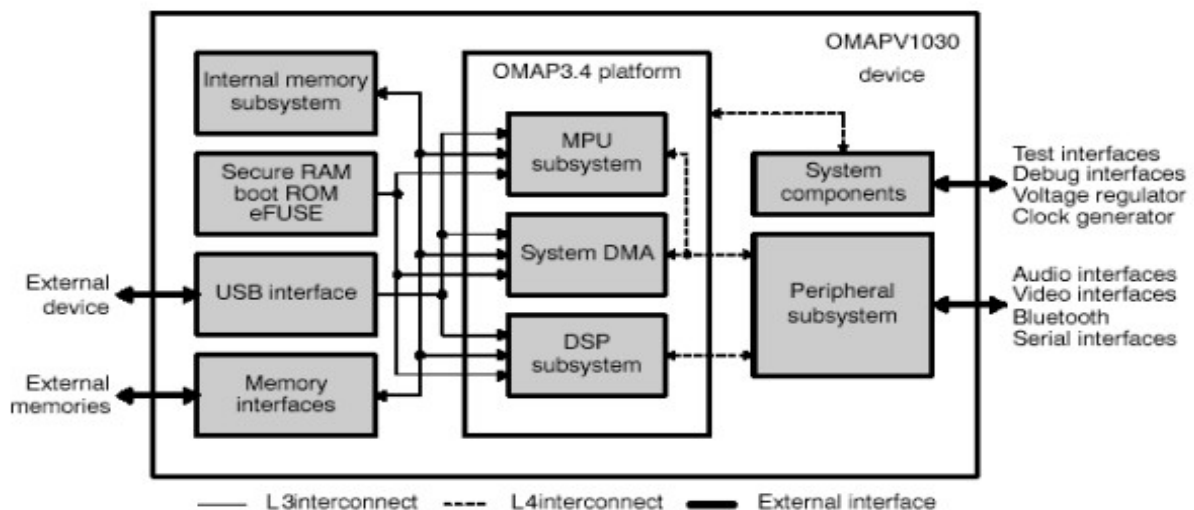
The OMAPV1030's silicon process technology is a c027.0 90-nm digital CMOS.

3.3.2 Block Description

The OMAPV1030 E-GPRS multimedia device is based on an OMAP3.4 platform that integrates:

- The MPU subsystem
- The DSP subsystem
- A system DMA
- A traffic controller providing:
- External memory interfaces with:
 - A slow interface (EMIFS) to ROM, SRAM, FLASH memories
 - A fast interface (EMIFF) to SDRAM memories
- Layer 3 (L3) interconnect made of two OCP target ports (OCP-T1 and OCP-T2) and one OCP initiator port (OCP-I)
- Layer 4 (L4) interconnect made of two DSP peripheral busses (private DSP TIPB and shared DSP TIPB) and two MPU peripheral busses (public MPU TIPB and private MPU TIPB)
- Clock management
- A set of processor peripherals:
 - Three 32-bit timers, a 16-bit Watchdog timer, and an interrupt handler for the MPU
 - Three 32-bit timers, a 16-bit Watchdog timer, and a 2nd-level interrupt handler for the DSP
- Test and debug interfaces (JTAG, Window Tracer)
- Trace capabilities: ETM9 and Ctools

The other OMAPV1030 modules or subsystems are connected to the OMAP3.4 platform through the L3 and L4 interconnects.



<Fig.7> OMAPV1030 Top-Level Architecture Overview

3. HW Circuit Description

The OMAP3.4 platform is the computing core of the device. The other OMAPV1030 components are organized as follows:

- The internal memory subsystem is made of a single-port 256K-bit shared internal SRAM.
- The security subsystem is a set of several components, including dedicated a secure mode to run secure applications.
- A master-slave USB module provides an external interface supporting high data transfer rates between the OMAPV1030 and external application
- The memory interfaces provide access to external memories. There are two types of memory controllers:
 - SDRAM controller supporting SDR and DDR modes
 - General-purpose controller supporting asynchronous and synchronous
- The system components are used to manage system interactions such as interrupts, clock control, reset control, and idle management.
- The peripheral subsystem refers to all the peripherals accessible by the MPU and/or the DSP. They are all OCP- or TIPB-compliant and are connected to the OMAP3.4 platform through the traffic controller or the TIPB busses.

3.3.3 RF Interface (Digital RF Interface)

The OMAPV1030 radio interface module of OMAPV1030 device is an interface that carries the following information:

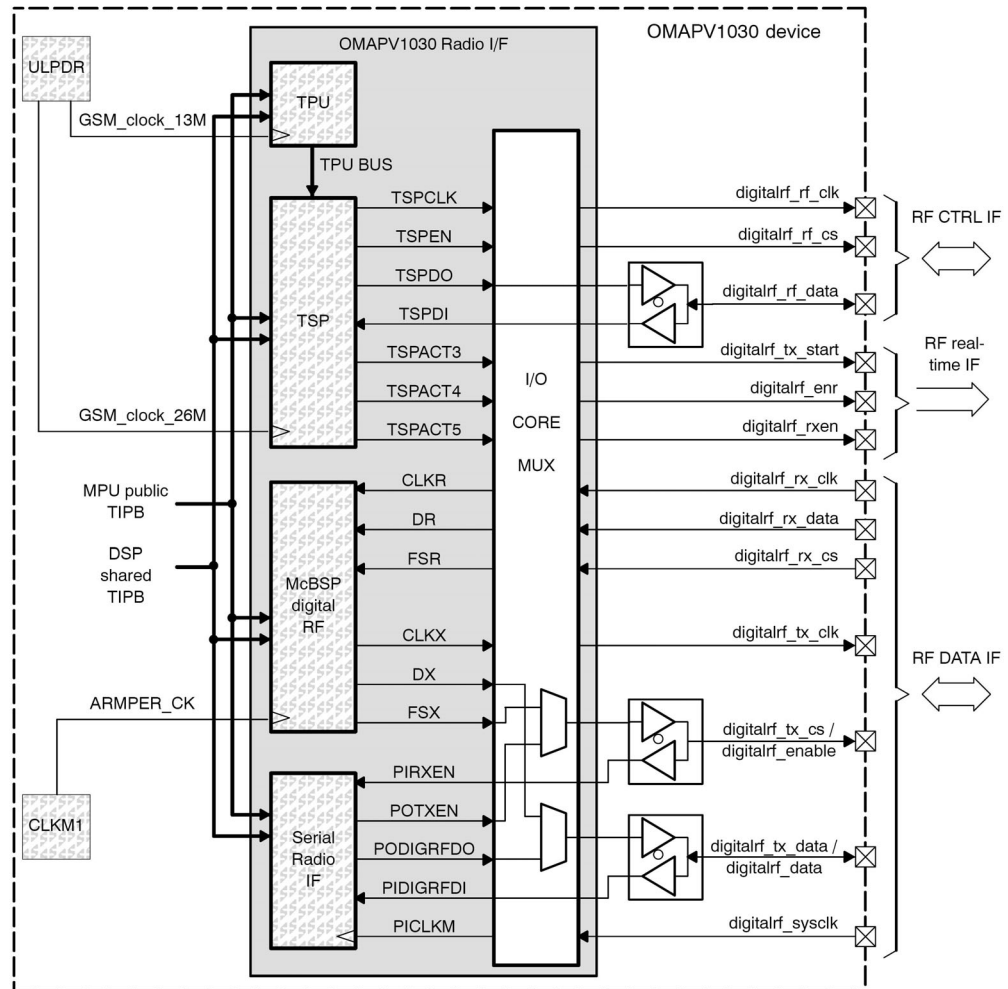
- Transmit symbols from DBB to RF IC
- Receive samples from RF IC to DBB
- Bidirectional information control
- Real-time and activation signals from DBB to RF IC
- System clock

The OMAPV1030 radio interface module of OMAPV1030 device supports two types of radio interfaces.

They differ mainly in the type of data interface:

- - The first interface is based on a standard six-wire scheme: three wires for transmit and three for receive.
- The second one is based on a two-wire bidirectional scheme: one wire for data in/out, and one for control receive/transmit.

3. HW Circuit Description



<Fig.8> OMAPV1030 Radio Interface

This implementation is based on the following:

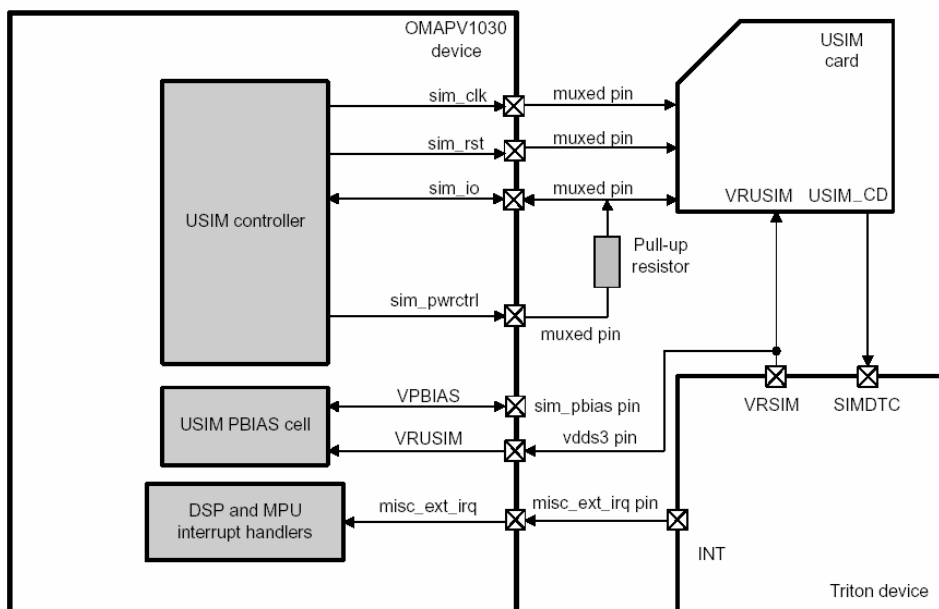
- The time processing unit (TPU) module is a real-time sequencer dedicated to monitoring GSM baseband processing.
- The serial port of the time serial port (TSP) module controls both interfaces.
- The real-time TSPACT signal of the TSP module
- The McBSP digital RF module is used for the six-wire data interface.
- The serial radio interface module is used for the two-wire data interface.
- A system clock interface receives a squared 26-MHz clock from the RF IC.

3. HW Circuit Description

3.3.4 SIM interface

SIM interface scheme is shown in below.

SIM_IO, SIM_CLK, SIM_RST, SIM_PWRCTRL ports are used to communicate DBB via ABB with plugged sim card and the LDO (VRSIM) in ABB enables operate 1.8V to 2.5V to search SIM card



<Fig.9> SIM Interface

SIM_CLK: SIM Card reference clock

SIM_PWCTRL: SIM Card power activation

SIM_RST: SIM Card async/sync reset

SIM_IO: SIM Card bi-directional data line

VRUSIM(Power supply VCC): 3 V \pm 10% (class B) or 1.8 V \pm 10% (class C)

Misc_ext_irq: USIM card presence detection (USIM_CD) purposes.

3.3.5 UART Interface

KM500D has Three UART Drivers as follow :

- UART1: USB
- UART2: ETM, Calibration
- UART3: AT command, Fax_modem, Bluetooth

UART1(USB)		
Resource	Name	Description
TR_USB_DP	DP	Data
TR_USB_DM	DM	Data
USB_PWR	POWER	USB_POWER
VBUS	VBUS	USB_Detect
UART2 (ETM)		
UART2_RX	RX	Receive Data(UART2)
UART2_TX	TX	Transmit Data(UART2)
UART3 (Bluetooth)		
UART3_RXD	UART3_RXD	Receive Data
UART3_TXD	UART3_TXD	Transmit Data
UART3_RTS	UART3_RTS	Request To Send
UART3_CTS	UART3_CTS	Clear To Send

<Table.2> UART Interface Spec

3. HW Circuit Description

3.3.6 GPIO Map

In total 22 allowable resources, KM500D is using 9 resources except 3 resources dedicated to SIM and Memory. KM500D GPIO(General Purpose Input/Output) Map, describing application, I/O state, and enable level, is shown in below table 3.

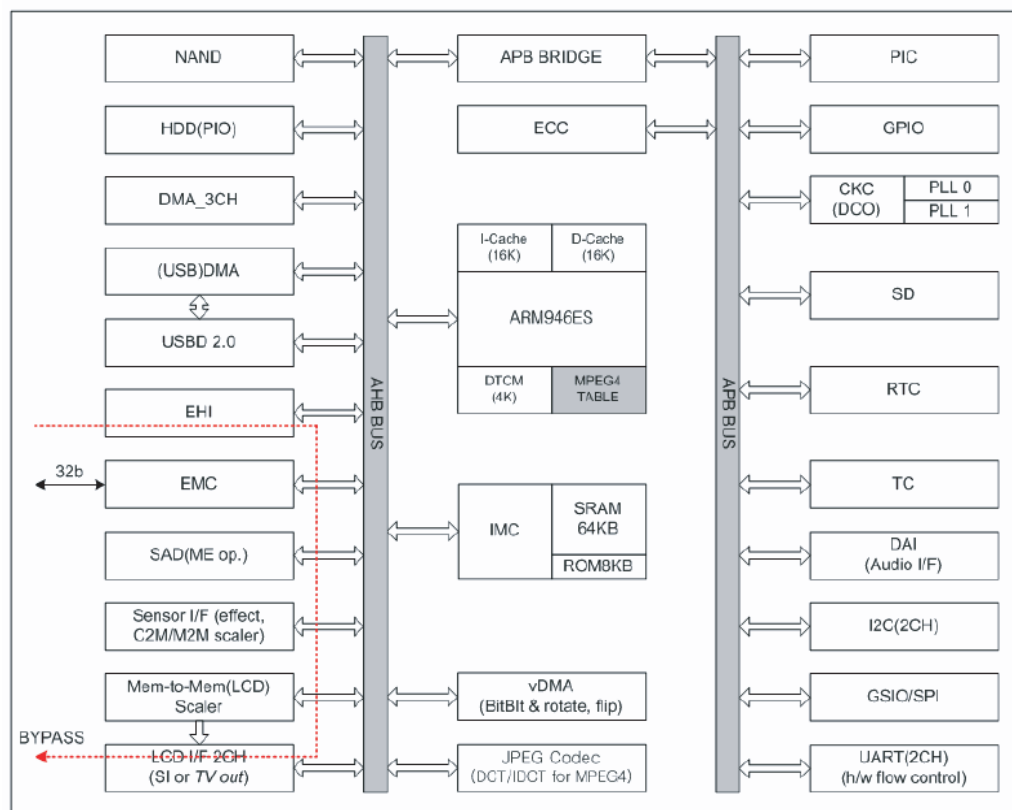
GPIO No.	Mode0	COMMENT	ACTIVE
gpio_0	MM_RESET	MM RESET	LOW → HIGH
gpio_1	SLIDE	SLIDE UP/DOWN Signal	-
gpio_2	CHG_EN	Charger IC Enable	LOW
	UART3_DSR	UART3 DSR	
gpio_4	USB_BOOT_SEL	USB Download Selection	LOW
gpio_5	MM_INT	TCC7402Interrupt to host	
gpio_6	USB_DETECT_BB	BB DETECT USB	
gpio_7	BPEN	TCC7402 BYPASS MODE ENABLE	HIGH
gpio_8	BT_NRST	Bluetooth Reset	LOW → HIGH
gpio_9	CAM_RECORD_SEL	CAM RECORD SELECT	HIGH
gpio_10	GATED_IOEN	TCC7402 IO ENABLE	HIGH
gpio_12	MM_1V2_EN	MM 1.2V LDO ENABLE	HIGH
gpio_13	FM_INT	FM Radio Interrupt to Host	
gpio_16	MAIN_KEY_BL_EN	MAIN KEY BACK LIGHT ENABLE	HIGH
gpio_17	BOOT_SEL	Neptune Booting Mode Selection(No Bypass Mode)	PULL-UP
gpio_18	DP_PWON	LCD LDO Enable	HIGH
gpio_19	MM_LDO_EN	MM LDO ENABLE	HIGH
gpio_20	DAC_EN	DAC ENABLE	HIGH
gpio_21	JACK_DETECT_3.5	3.5 PHI JACK DETECT	LOW
gpio_22	LCD_RESET	LCD RESET	LOW → HIGH
gpio_23	_CHG_STAT	Charging Indication	LOW
gpio_26	USBCHG_INT	USB-CHARGE INTERRUPT TO TCC7450	
gpio_27	HOOK_DETECT	HOOK DETECT	LOW
gpio_28	HOOK_EN	HOOK ENABLE	HIGH
gpio_29	MM_USB_EN	MM USB ENABLE	HIGH
gpio_30	MM_1V5_EN	MM 1.5V ENABLE	HIGH
gpio_32	SPK_EN	SPEAKER/RECEIVER Selection	HIGH:SPEAKER
gpio_43	HS_PATH_SEL	HS PATH SELECTION	
gpio_46	FADEIN_BL_EN	MP3 BACKLIGHT ENABLE	HIGH
gpio_47	JACK_DETECT	JACK DETECT	LOW
gpio_59	LCD_BL_EN	LCD Backlight Enable	HIGH
gpio_60	LCD_ID	LCD Maker ID	
gpio_63	FM_RESET	FM RESET	

<Table.3> GPIO Map

3.4 Multimedia IC

TCC740xA series are system LSI for multimedia application processor based on the ARM946E-S, ARM's proprietary 32-bit RISC CPU core. It can decode and encode (M)JPEG, MPEG4, MP3 or other types of audio / voice / video / image compression / decompression standards by software based architecture.

The on-chip USB 2.0 compliant controller enables the data transmission between a personal computer and storage device such as NAND flash, SD.



<Fig.10> Functional Block Diagram of TCC740xA

3. HW Circuit Description

• General features

ARM946E-S CPU core (16KB instruction/data cache, operating up to 200MHz)
8K bytes of internal boot ROM with various boot procedure (NAND, USB, EHI) and security
64K bytes of internal SRAM for general usage
USB2.0 Device (high, full speed)
I2S interface for external audio
I2C compatible serial bus for audio CODEC & CCD/CMOS sensor control
32-bit 1Hz counter
RTC (Real Time Clock) for battery backup
EHI (External Host Interface) for parallel host interface
Secure Digital Card (SD)

3.4.1 Core

The TCC74x has adopted the ARM946E-S (r1p1) core for controlling system and processing various kinds of digital signals. The ARM946E-S is a Harvard architecture cached processor with separate 16Kbyte data and 16Kbytes instruction caches, each with 8-word of line length. A protection unit allows eight regions of memory to be defined, each with individual cache and write buffer configurations and access permissions. The cache system is software configurable to provide highest average of performance or to meet the needs of real-time systems.

The followings are key features of the TCC74xx CPU core.

- CPU ARM946E-S
- Cache 16KB for Data / 16KB for Instruction
- TCM 4KB dual port data TCM

3.4.2 USB2.0 Device Controller

The TCC7402 USB2.0 Device supports a fully compliant to USB 2.0 specification, highspeed (480 Mbps) functions and suspend/resume signaling. The USB function controller has an endpoint EP0 for control, two in/output endpoints EP1/EP2 for bulk data transaction and an EP3 for interrupt data transaction.

3.4.3 EHI

This LSI has the external host interface (EHI) that allows the external host device to be connected to the on-chip system bus. The external host device can be directly connected to 68/80-series interfaces and access the memory area of this LSI. For software based data transfer, EHI can generate the internal interrupt of this LSI, and this LSI can also send interrupt request to the external host controller.

3.4.4 u-SD CONTROLLER

SD/MMC controller is designed to support SD specification Ver.1.01, SDIO specification Ver1.10, CEATA and MMC specification Ver.3.0. By using DMA and internal FIFO(8x32bits) data transfer rate is up to maximum speed, SD/MMC card supports. Moreover because this block has internal clock controller, it is possible to adjust operating frequency for power saving or other operating conditions just from setting special register.

3.4.5 DAI

The TCC74xx provides digital audio interface that complies with IIS (Inter-IC Sound). The DAI has five input/output pins for IIS interface; MCLK, BCLK, LRCK, DAI, DAO. All DAI input/output pins are multiplexed with GPIO pins; GPIO_B<16:20>. The MCLK is the system clock pin that is used for CODEC system clock. In master mode, the MCLK can be generated from clock generator in which that is known as a DCLK, or fed from the outside of chip in slave mode. The DAI can process 256fs, 384fs and 512fs as a system clock. 256fs means that the system clock has 256 times of sampling frequency (fs). The BCLK is the serial bit clock for IIS data exchange. The DAI can generate 64fs, 48fs and 32fs by dividing a system clock. The polarity of BCLK can be programmed. That is, the serial bit can be stable either rising edge of BCLK or falling edge of BCLK.

The LRCK is the frame clock for the stereo audio channel Left and Right. The frequency of LRCK is known as the "fs" - sampling frequency. Generally, for audio application - such as MP3 player, CD player, the fs can be set to 8kHz, 16kHz, 11.05kHz, 24kHz, 32kHz, 44.1kHz and 48kHz. For supporting the wide range of sampling frequency in audio application, the DCO function is very useful to generate a system clock. Refer the chapter of clock generator for detail information. All three clocks (MCLK, BCLK, LRCK) are selectable as master or slave.

The DAI, DAO are the serial data input output pins respectively. The DAI has two 8-word input/output buffers. It has a banked buffer structure so that one side of buffer is receiving/transmitting data while the other side of that can be read/written through the DADI_XX/DADO_XX registers. The maximum data word size is 24 bit. Data is justified to MSB of 32bits and zeros are padded to LSB.

There are 2 types of interrupt from IIS; transmit done interrupt, receive done interrupt. The transmit-done interrupt is generated when the 8 words are transferred successfully in the out put buffer. At this interrupt, user should fill another 8 more words into the other part of the output buffer in the interrupt service routine (ISR). In this ISR routine, 8 consecutive stores of word data to the DADO registers are needed.

The receive-done interrupt is generated when the 8 words are received successfully in the input buffer. At this interrupt, user should read 8 received words from the input buffer using 8 consecutive load instructions from the DADI registers.

3.4.6 Camera & LCD

The TCC7402 provides camera interface.

The features of CIF are is 8-bit data and sync line which supports CCIR 601/656, 4:2:2, YCbCr(YUV).

The TCC7402 provides LCD interface. The LCD MODULE of KM500 is 2" TFT-LCD which is displayed 65000 color. The LCD controller is used to send out image data from the system memory

3. HW Circuit Description

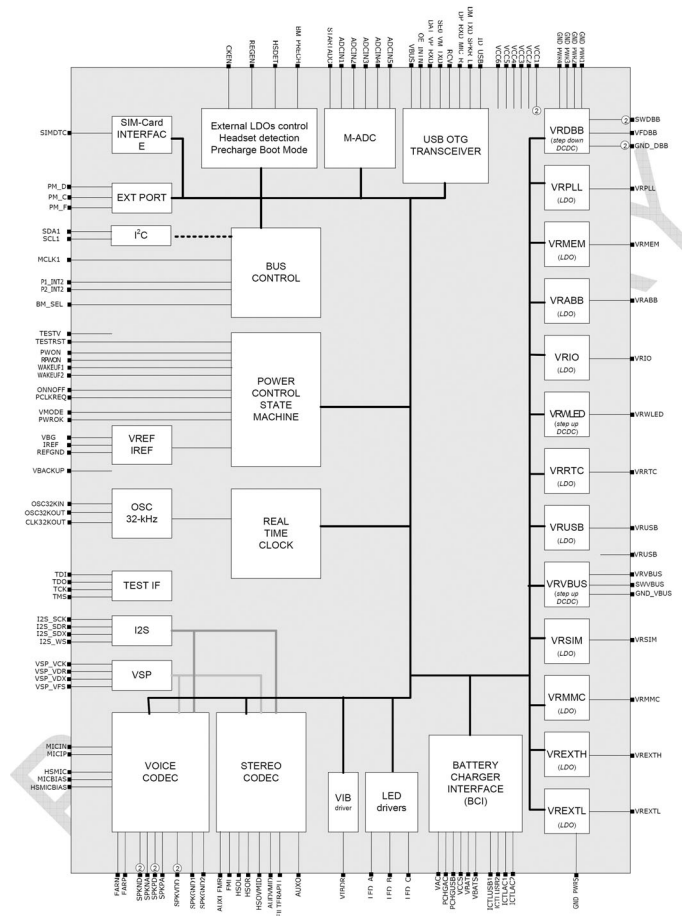
3.5 Analog Baseband

3.5.1 General Description

The TRITON chip is the analog and power management part of the Texas Instruments next generation wireless terminal. These GSM/GPRS/E-GPRS, 3G W-CDMA, CDMA2000 platforms are composed of a digital baseband processor, a RF chip, an application processor OMAP and of different peripheral devices like a LCD panel, a Multi-Media Card, a Bluetooth modem, a GPS modem.

The purpose of the Triton device is to provide to platforms the following resources:

- A power management system
- Power supply resources
- A voice and audio interface
- A battery charger
- A monitoring system
- A real time clock resource
- A USB 2.0 OTG transceiver with a carkit interface
- Three White-LEDs drivers
- A vibrator driver
- A SIM-Card detection
- A thermal shutdown
- An I2C interface
- A JTAG and boundary scan



<Fig.11> TWL3029 Architecture

3.5.2 Audio Signal Processing & Interface

The Audio module consists of a Voice Codec dedicated to mobile telephone terminal application and a Stereo path.

- The Voice Codec circuit processes analog audio components in the uplink path and transmits the converted data to the DSP speech coder through the voice serial port (VSP). In the downlink path, the Voice Codec converts the digital samples of speech data received from the DSP via the VSP port into analog audio signals.

The Voice Codec supports a 8kHz (default narrowband mode) to a 16kHz(wideband mode) sampling frequency.

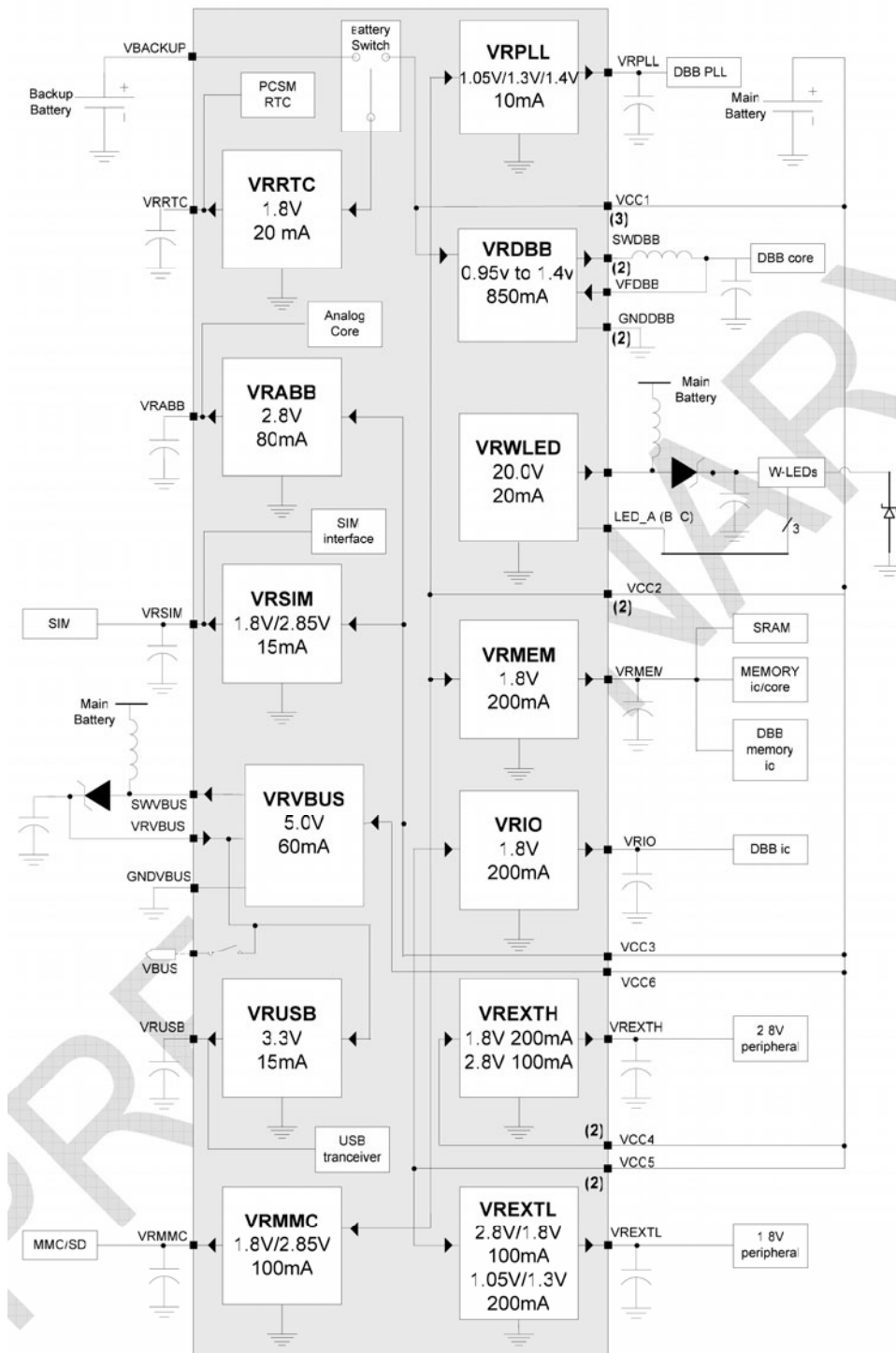
- The Stereo path converts audio digital samples received from the I2S serial interface into analog audio. It supports all standard frequencies from 8kHz to 48kHz (8, 11.025, 12, 22.05, 24, 32, 44.1 and 48kHz).
- Two included PLLs provide the suitable system clocks to the Voice and Stereo circuitry (ADC, DACs, Digital Filters, Digital interfaces). The Audio module supports 3 possible input master clocks: 12MHz, 13MHz and 19.2MHz.

3.5.3 Power Resources

The power supply module of Triton generates the different power supplies required by Triton, the processors and the external peripherals.

VRPLL	VRPLL (programmable LDO, 1.05/1.3/1.4V), ADPLL, APLL and the <u>slice</u> .
VRMEM	VRMEM (LDO, 1.8V), external SRAM, DBB memory interface.
VRIO	VRIO (LDO, 1.8V), DBB and TWL3029 I/Os, TWL3029 digital core.
VRMMC	VRMMC (programmable LDO, 1.8V, 2.85v), MMC/SD modules.
VRSIM	VRSIM (programmable LDO, 1.8V, 2.85v), SIM-card.
VRABB	VRABB (LDO, 2.8V), TWL3029 analogue blocks.
VRRTC	VRRTC (LDO, 1.8V), TWL3029 RTC, DBB I/Os, PM state machine.
VRUSB	VRUSB (LDO, 3.3v), USB transceiver.
VREXTH	VREXTH (programmable LDO, 1.8V, 2.8v), optional external LDO.
VREXTL	VREXTL (programmable LDO, 1.8V, 2.8v), optional external LDO.
VRVBUS	VRVBUS (step-up DCDC, 5.0v), VRUSB LDO input voltage reference.
VRWLED	VRWLED (step-up DCDC, 20.0v), three series white LEDs driver.
VRDEB	VRDEB (step-down DCDC, from 0.95 up to 1.4v, 30mV steps), DDB core.

3. HW Circuit Description



<Fig.12> Power Supply Scheme

3.5.4 Monitoring ADC

The monitoring ADC (MADC) consists of a 10-bit analog-to-digital converter (ADC) combined with an 11- input analog multiplexer. The ADC implementation consists of a successive approximation conversion.

Five of the eleven inputs are available externally (ADIN1..5), and the remaining six inputs are dedicated to die temperature measurement, main battery voltage, backup battery voltage, charger voltage, charger current monitoring and USB Vbus voltage. Three external inputs (ADIN1..3) are standard inputs. The two others (ADIN4..5) which are associated with current sources, are intended for battery temperature and battery type measurements.

ADC 8 channels		
Resource	Name	Description
VCHG	VCHG	Charging Management
VBAT	VBAT	
ICTL	ICTL	
ADIN1	TEMP_SENSE	Temperature Sensing
ADIN2	JACK_TYPE	Remote control's Detect- Now No Use
ADIN3		
ADIN4		REMOTE Control Detect
ADIN5	BATT_TEMP	Battery Sensing - Now No Use

<Table.5> ADC Channel Spec

3.5.5 Switch ON/OFF

KM500D Power State: Defined 4cases as follow

- Power-ON: mobile is powered by main battery or backup battery.
- Power-OFF: mobile isn't any battery.
- Switch-ON: mobile is powered and waken up from switch-off state.
- Switch-OFF: mobile is powered to maintain only the permanent function(ULPD).

To enter into Switch-ON state, one of following 4 condition is satisfied.

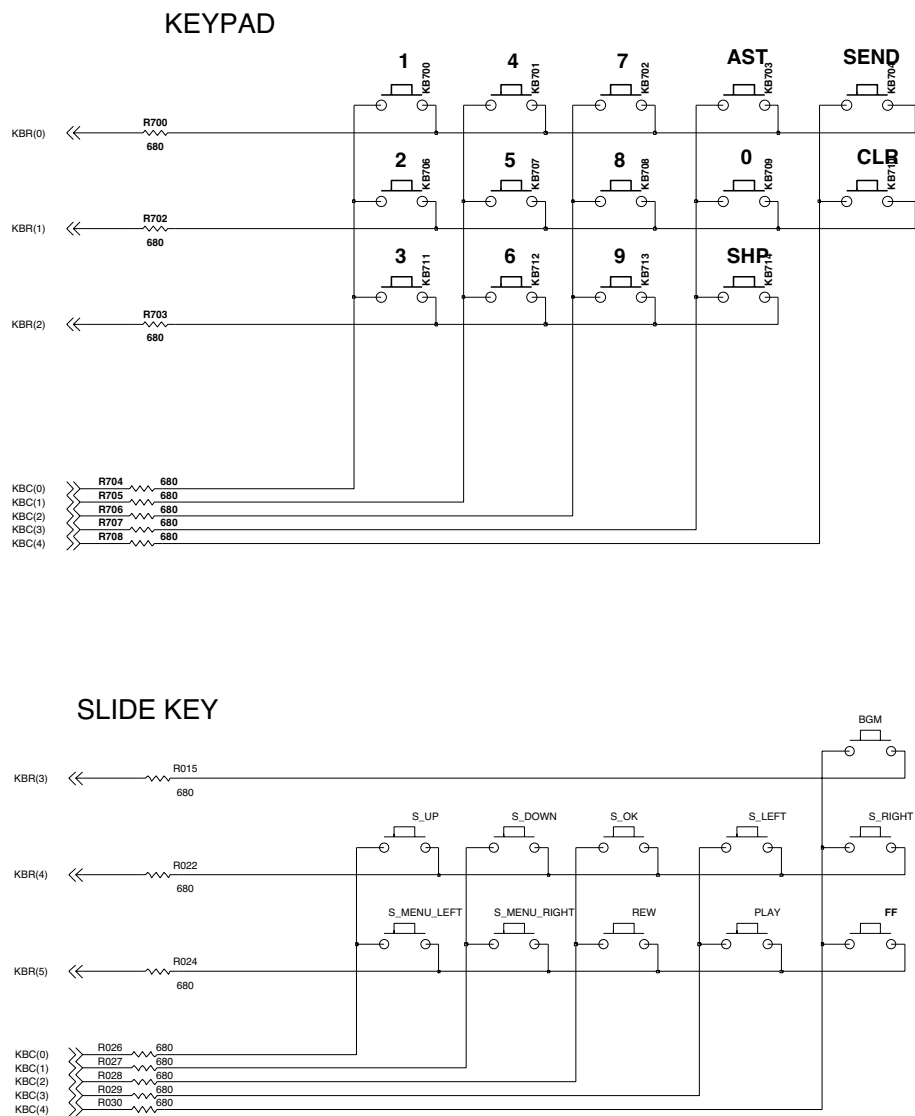
- PWR-ON pushed after a debouncing time of 30ms.
- ON_REMOTE: After debouncing, when a falling edge is detected on RPWON pin.
- IT_WAKE_UP: When a rising edge is detected on RTC_ALARM pin.
- CHARGER_IC: When a charger voltage is above VBAT+0.4V on VCHG.

3.5.6 Memories

- 1G Mbit NAND Flash + 512Mbit DDR RAM

3. HW Circuit Description

3.5.7 Keypad Map description

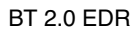


<Fig.13> Keypad schematic

3.5.8 System Connector

Pin #	ME550c	Description
	18Pin	
1	FM_ANT	FM_RADIO ANTENNA
2	HSMICIP/HOOK DETECT	HEAD SET
3	JACK_TYPE	HAED SET
4	HSO_L	CHARGING (VCHG)
5	HSO_R	CHARGING (VCHG)
6	UART3_TX/USB_DP	USB/UART3 (Transmit Data)
7	UART3_RX/USB_DM	USB/UART3 (Receive Data)
8	JACK_DETECT	HEAD SET
9	VBAT	BATTERY(+4.2V)
10	VBAT	BATTERY(+4.2V)
11	RPWON	REMOTE POWER ON
12	VCHG_IN	CHARGING (VCHG)
13	VGHG_IN	CHARGING (VCHG)
14	UART3_DSR	UART3 (Transmit Data)
15	VBUS	USB POWER(+5.0 V)
16	UART2_TX	TEST : UART2 (T ransmit Data)
17	UART2_RX	TEST : UART2 (Receive Data)
18	GND	GND

3.6.1 Bluetooth Circuit



<Fig.14> BT schematic

3.6.2 Pin Description

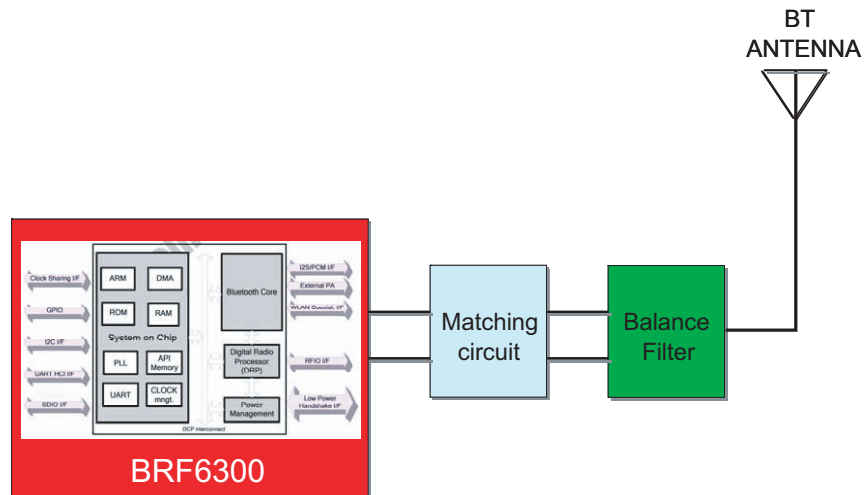
Pin	Description
CLOCKS/GLOBAL SIGNALS	
SLOW-CLK_IN	32.768.kHz clock input
XTALM	Negative fast crystal in
XTALP/FAST_CLK_IN	Positive fast crystal in/fast clock input
RADIO FREQUENCY INTERFACE	
RFP	Receiver/transmit differential RF I/O
RFM	Receiver/transmit differential RF/IO
POWER MANAGEMENT	
VLDC_OUT	Very-low drop-output voltage
KA_OUT	Keep alive output
NSHUT_DOWN	Devices shutdown input(active low) also acts as power-on reset
POWER SUPPLY	
VBAT	Battery power supply
VDD_IO1	Power supply for I/O
BB_LDO_OUT1	Baseband LDO output
ANA_LDO_OUT	Analog LDO output
RFIO_LDO_OUT	RFIO LDO output, power source for RF elements
OSC_LDO_OUT	OSC LDO output
VDD_IN_BB	Baseband LDO input voltage
BGAP_V	BGAP reference voltage
BGAP_I	BGAP reference current(used only for test)
GROUND	
VSS	Digital ground
VSSA	Analog ground/RF analog ground
I/O NAME	
AUD_CLK	Input-when external codec is configured as master(default configuration)
AUD_FSYNC	
AUD_IN	
AUD_OUT	High Z with PD, except when transmitting voice samples
GPIO0	EXT_CLK_REQ_OUT
GPIO1	EXT_CLK_REQ_IN
HCI UART INTERFACE	
HCI_RX	HCI UART data receive
HCI_TX	HCI UART data transmit

3. HW Circuit Description

3.6.3 Bluetooth circuit Description

- Single chip 90 nm CMOS Bluetooth ROM solution
- Bluetooth 1.1, 1.2 and 2.0 specification compliant - up to HCI level.
- Enhanced Data Rate (2&3 Mbps)
- Future support for Bluetooth 2005 core release (software upgrade when Bluetooth specification will be available)
- Enhanced host interfaces (UART, SDIO)
- Very low power consumption
- Pin-to-pin compatible with BRF6150
- On-chip Digital Radio Processor (DRP)
 - o Integrated 2.4 GHz RF transceiver
 - o All digital PLL transmitter with digitally controlled oscillator
 - o Near zero IF architecture
 - o On-chip TX/RX switch
 - o Support for Class 1 applications
- Embedded ARM7TDMI Microprocessor System On Chip
 - o High rate H4 UART HCI
 - o High rate HCI Three Wire UART Transport Layer (H5)
 - o SDIO transport layer
 - o Flexible PCM and I2S interfaces: full flexibility for data order, sampling and positioning
 - o Automatic clock detection mechanism
 - o Patch trap mechanism that enables feature changes in ROM (ROM updates, improvements)
- On-chip Power Management adapted to cellular application
 - o Direct connection to battery or external LDO 1.7 to 5.4V
 - o IO supply voltage - 1.62 - 1.89V
 - o Power saving mode
 - o Shut-Down mode to minimize power consumption when Bluetooth is not used
- Temperature detection and compensation mechanism ensures minimal variation in the RF performance over the whole temperature range
- Seamless integration with TI OMAP™ application processor and GSM-GPRS/UMTS chipset
- Enhanced support for WLAN Co-existence (bandwidth sharing, antenna sharing)
- Spurious emissions compatible with GPS applications
- 5 external capacitors and balun/matching network required - total PCB area required only 45 mm² (BGA package)
- Package: 4.5x4.5 mm size, 0.5 mm ball pitch, pb-free Micro Star Junior BGA package.
- Stacked RAM support with the same footprint as the ROM device (for development phase only)
- TI proprietary low power scan achieves paging and inquiry scans with fast RSSI algorithm, at 1/3rd normal power.

3.6.4 Bluetooth Block Diagram



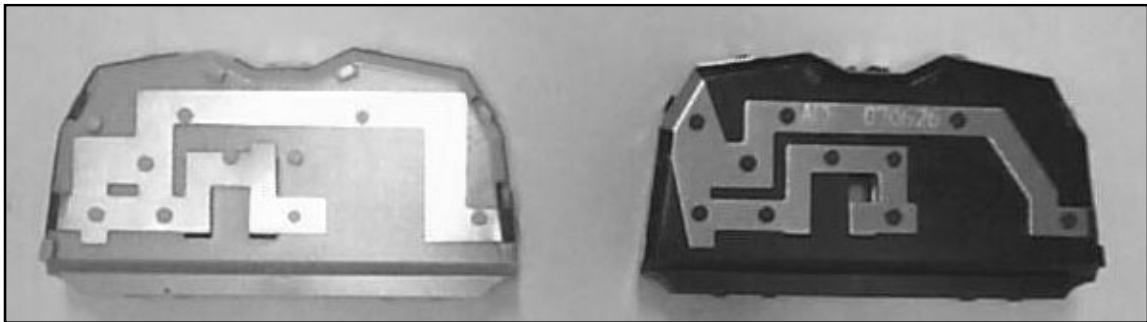
<Fig.15> BT Block Diagram

3. HW Circuit Description

3.7 Function difference

	RF Band	GSM900/ DCS1800			GSM850/ PCS1900
Design	Market	Europe	Asia / CIS	Latin America	Latin America

< Internal Antenna >



3. HW Circuit Description

3.8 BOM difference

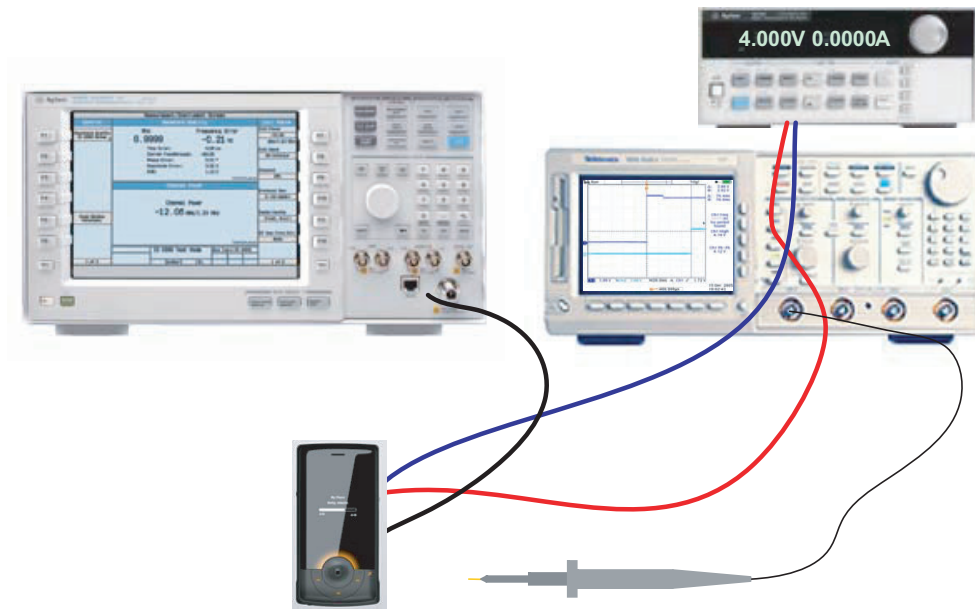
Part	Block		
Baseband	I/O	L200~202 : ELCH0005009 (100nH) L204 : ELCH0010302 (100nH) R294~295 : ECZH0000826 (27pF) R296 : ELCH0005009 (100nH) R297~299 : ECZH0000826 (27pF)	L200~202 : N.A L204: ERHZ0000701 (0Ω) R294: ERHZ0000483 (47Ω) R295~299 : N.A
	FM Radio	C301: ECZH0000813 C302: ECZH0001216 C303: ECZH0001216 C304: ECCH0004904 C305: ECCH0000182 C306: ECCH0004904 C307: ECCH0004904 C308: ECCH0000182 C309: ECCH0000182 C310: ECCH0004904 C311: ECCH0000182 R300: ERHZ0000476 R301: ERHZ0000438 R302: ERHZ0000438 R303: ERHZ0000476 R304: ERHZ0000405 R305: ERHZ0000406 R306: ERHZ0000485 R307: ERHZ0000485 R308: ERHZ0000406 R309: ERHZ0000406 R310 : ERHZ0000454 (27 KΩ) R311,R312 : N.A (0Ω pad, Open) U300: EUSY0320801 U301: EUSY0142501 U302: EUSY0223002 U303: EUSY0300101	C300~311 : N.A R300~309 : N.A R310: ERHY0003601 (2.7KΩ) R311,R312 : N.A (0Ω pad,Short) U300~303 : N.A

Part	Block		
RF	Tx , Rx matching	FL400 : SFSB0001401 C418 : ECZH0000822 (1.5pF) L401 : ELCH0004709 (3.3nH) C412 : ECZH0000822 (1.5pF) L404 : ELCH0009104 (6.8nH)	FL400 : SFSB0001301 C418 : ECCH0000901 (2.2pF) L401 : ELCH0004704 (1.5nH) C412 : ECCH0000183 (1.8pF) L404 : ELCH0009110 (5.1nH)
	Antenna matching	C410 : ELCH0004723 (1.8nH) L403 : ECZH0000813 (100pF) L400 : ELCH0001031 (15nH)	C410 : ECZH0000813 (100pF) L403 : ELCH0004726 (1.5nH) L400 : ELCH0004711 (22nH)

4. Trouble Shooting

4. Trouble Shooting

Trouble Test Set-up



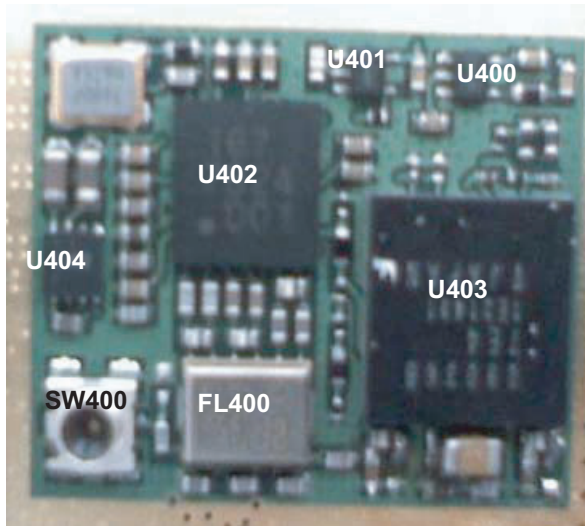
<Fig.16> Test Set Up

Power on all of test equipment

- Connect PIF-UNION JIG or dummy battery to the DUT for power up.
- Connect mobile switch cable between Communication test set and DUT when you need to make a phone call.
- Follow trouble shooting procedure

4.1 RF Part Technical Brief

4.1.1 RF Part Component



► Part Description

SW400: Mobile Switch Connector

U400: BT_CLK Buffer

U401: SysCLK Buffer

U402: RF Transceiver(B6PLD)

U403: Power Amplifier Module(RPF09036B)

U404: 2.8V Regulator

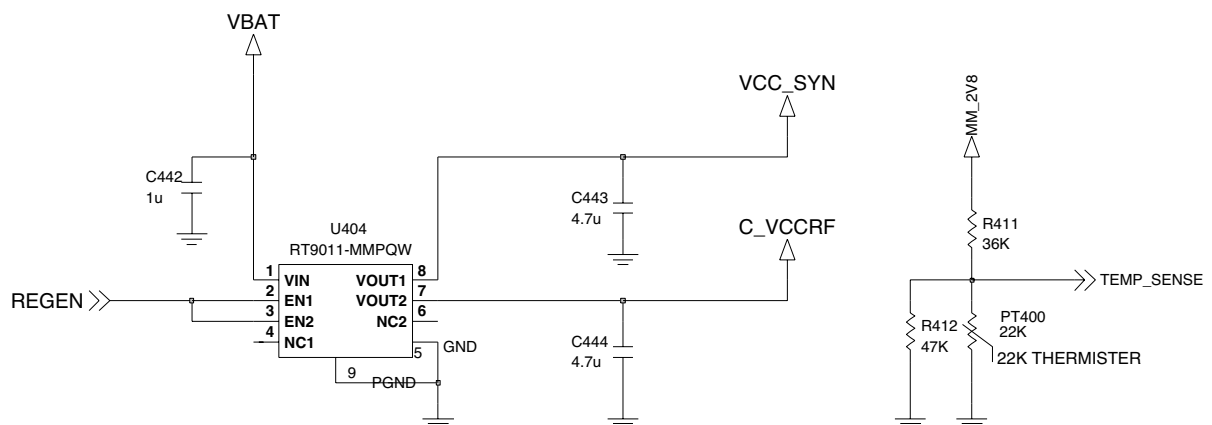
FL400: Front End Module(HWXR693)

X400: DCXO-26MHz Clock

4.1.2 Part Description

4.1.2.1 Regulator

Supply 2.8V to RF part



<Fig.17> Regulator Circuit Diagram

Select the RX / TX path and amplifier the power.

Front End Module Switch Control

C430: BAND_SELECT

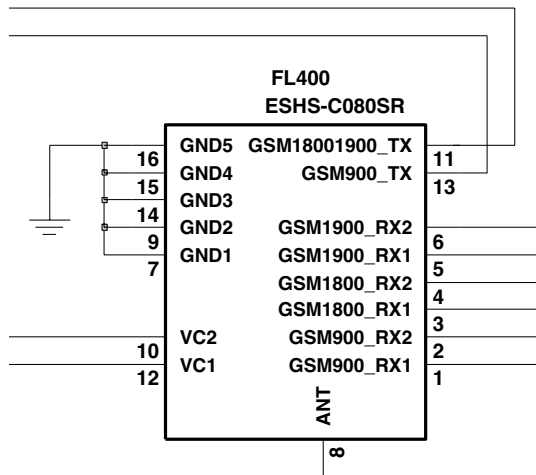
Application	Mode	Vtxon	Vband
GSM900 / GSM900	GMSK	High	High
	EDGE	High	High
DCS1800 / PCS1900	GMSK	High	Low
	EDGE	High	Low



4. Trouble Shooting

4.1.2.3 FEM

Pass wanted signal and include LNA matching circuit.



	Vc1	Vc2	Current
GSM900_Tx	2.6V	0V	8.0 mA
GSM1800 / 1900_Tx	0V	2.6V	8.0 mA
GSM900_Rx	0V	0V	<0.5μA
GSM1800_Rx	0V	0V	<0.5μA
GSM1900_Rx	0V	0V	<0.5μA

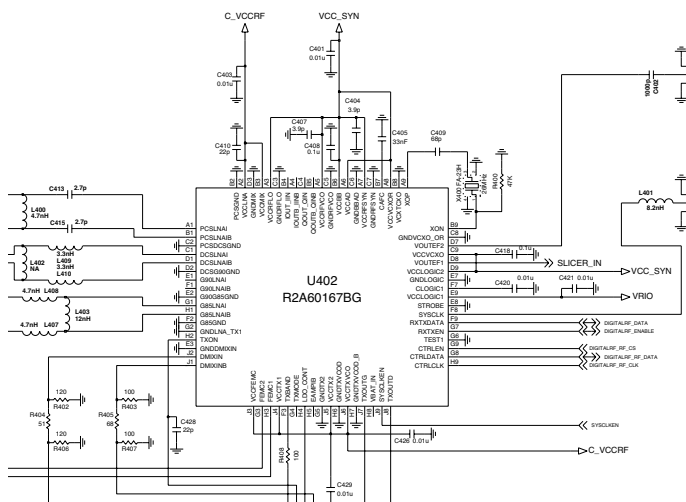
<Fig.19> FEM Circuit Diagram

4.1.2.4 RF Transceiver (B6PLD)

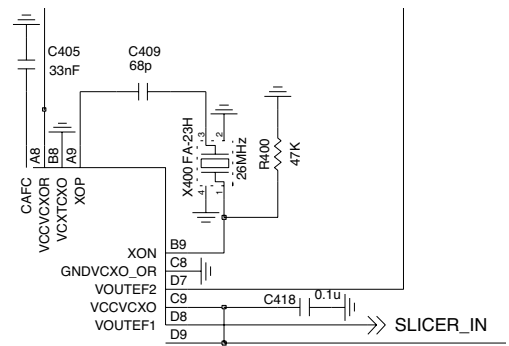
Digital Interface to Baseband. Integrate LNA and VCO circuit.

4.1.2.5 DCXO

Produce RF and BB reference Clock - 26MHz Clock.



<Fig.20> RF Transceiver Circuit Diagram

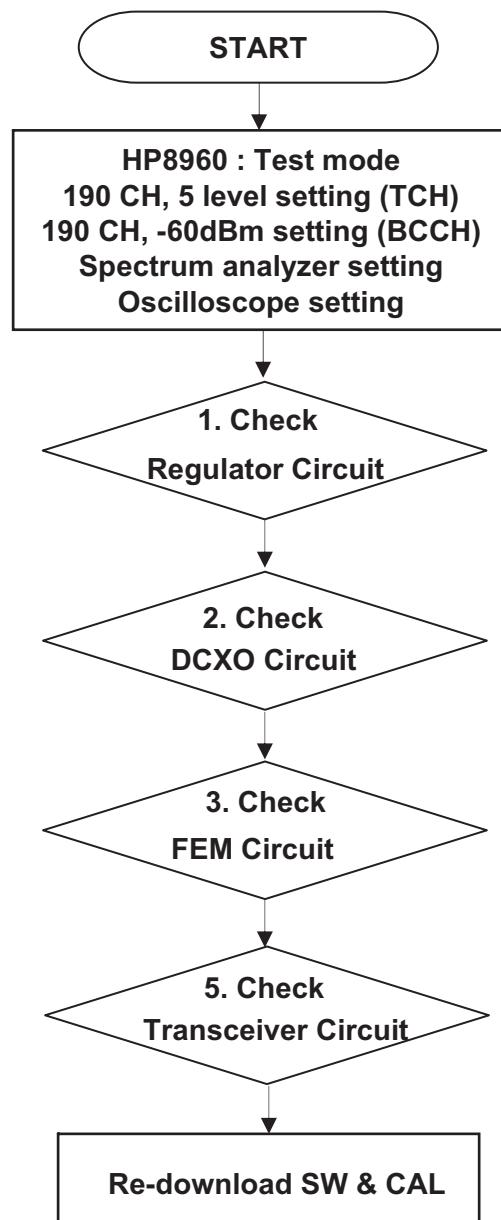
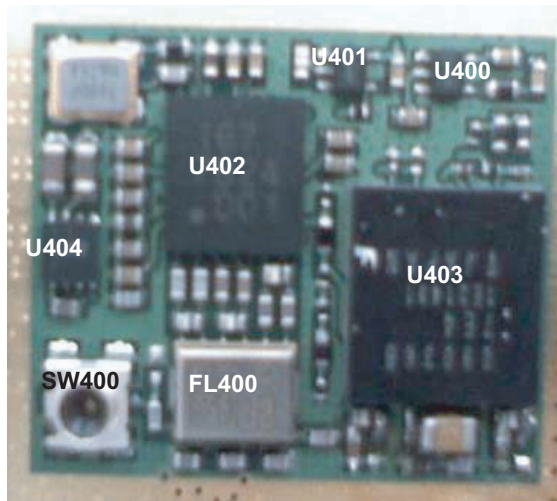


<Fig.21> DCXO Circuit Diagram

4. Trouble Shooting

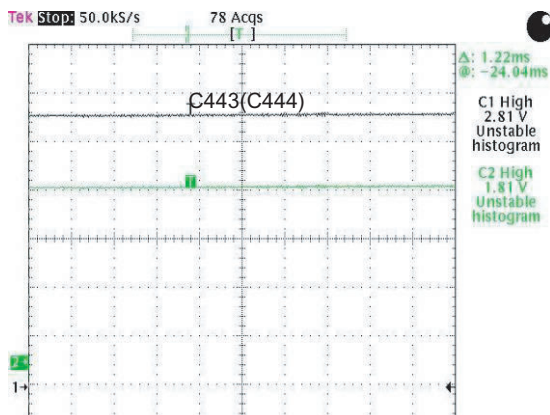
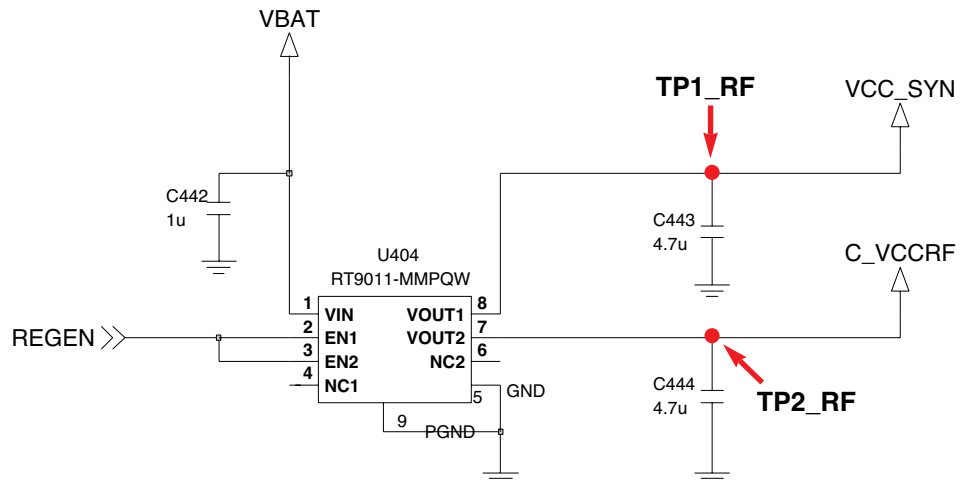
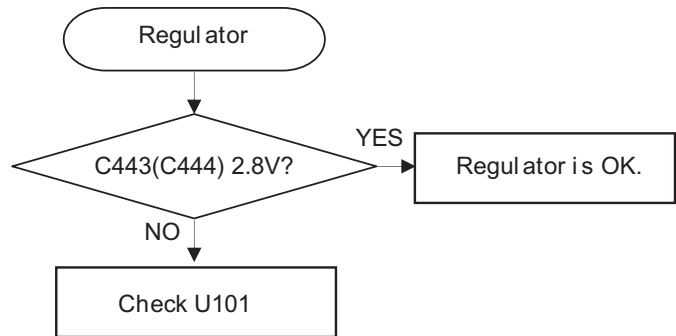
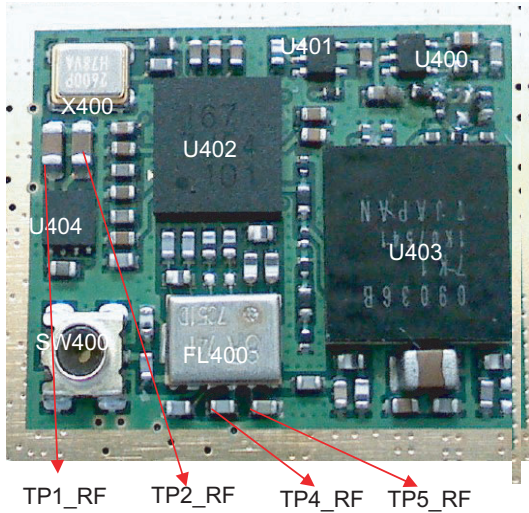
4.2 RF Part Trouble shooting

4.2.1 RF Receiving Path Trouble Shooting



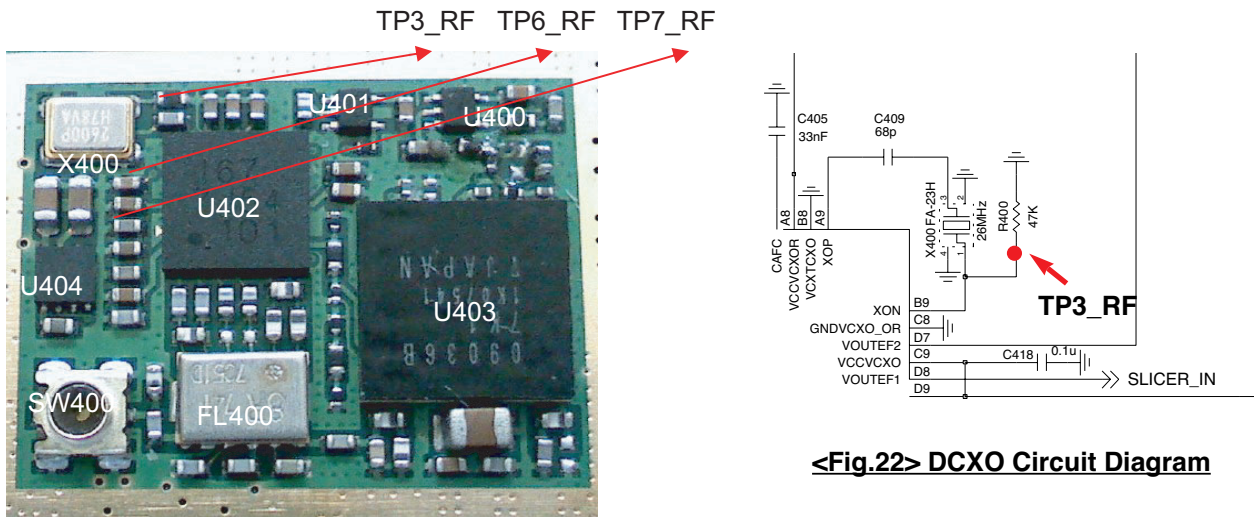
4. Trouble Shooting

4.2.1.1 Regulator Circuit

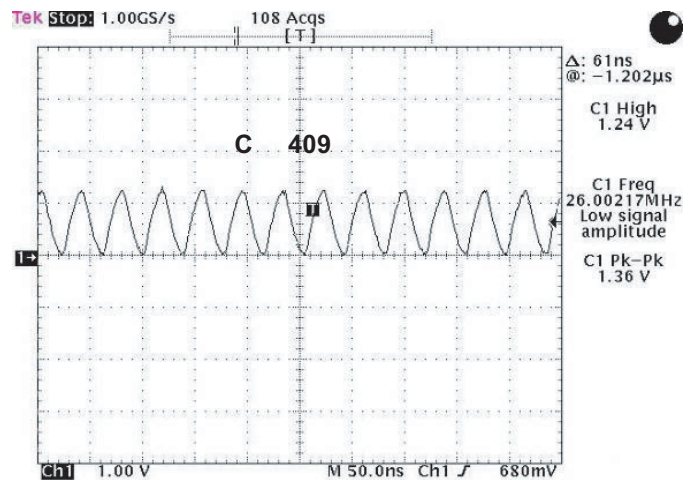
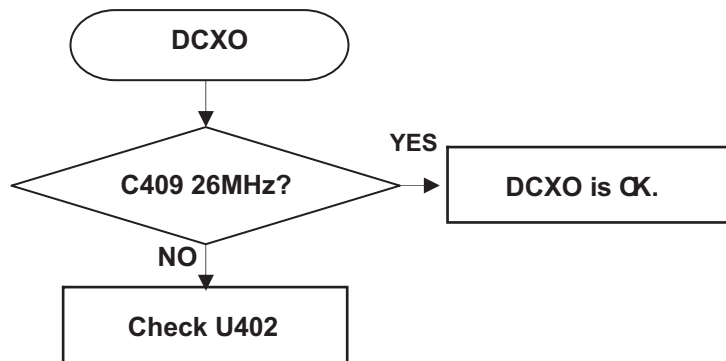


4. Trouble Shooting

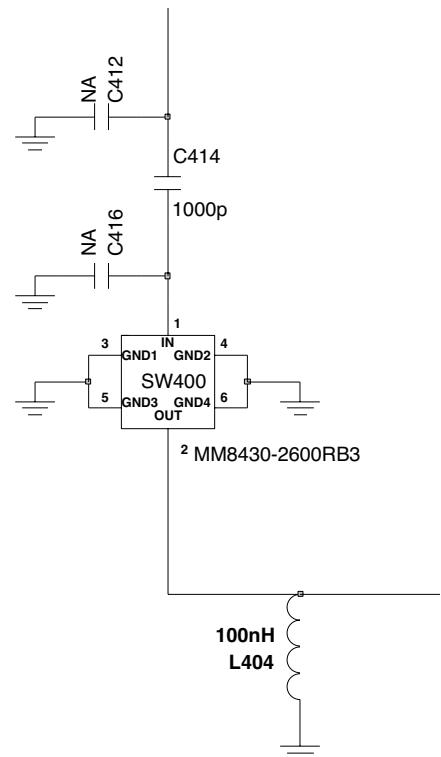
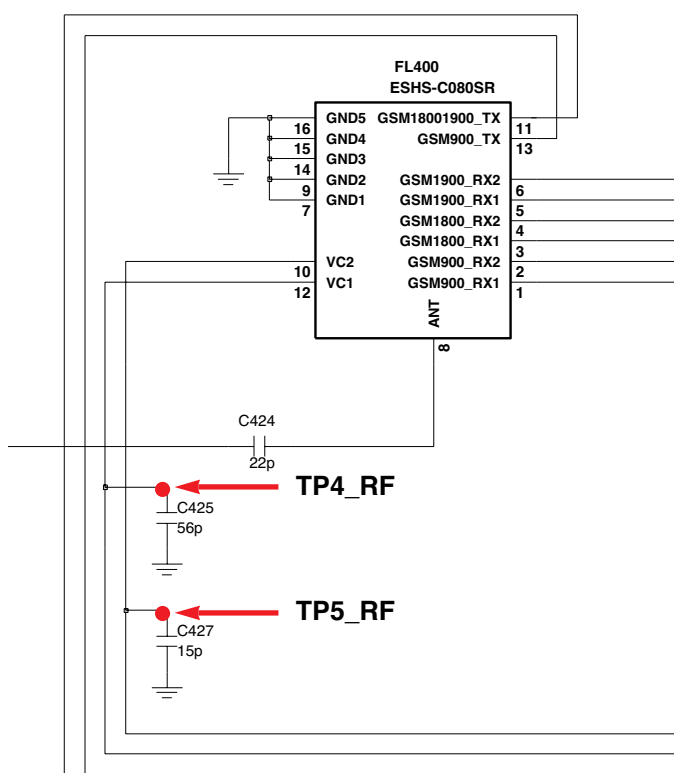
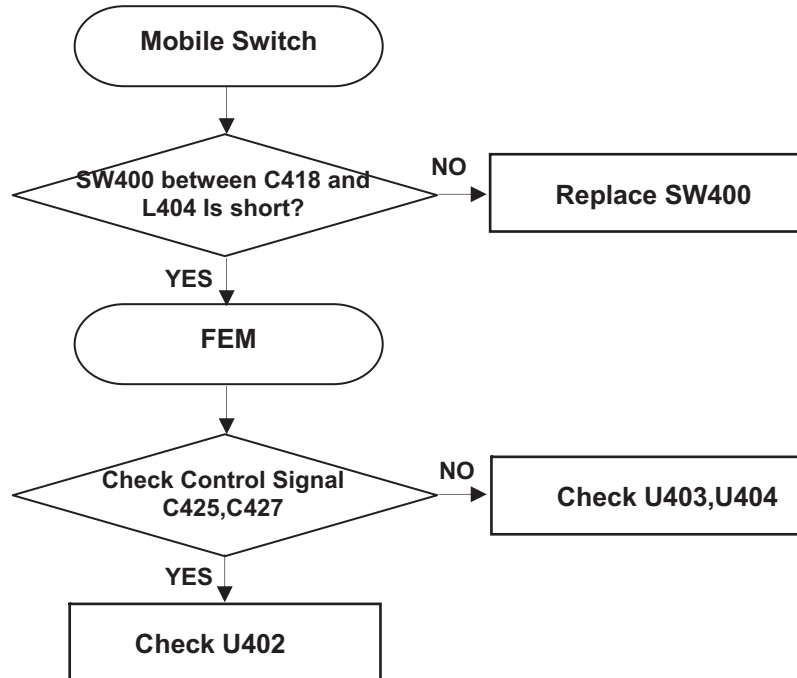
4.2.1.2 DCXO Circuit



<Fig.22> DCXO Circuit Diagram

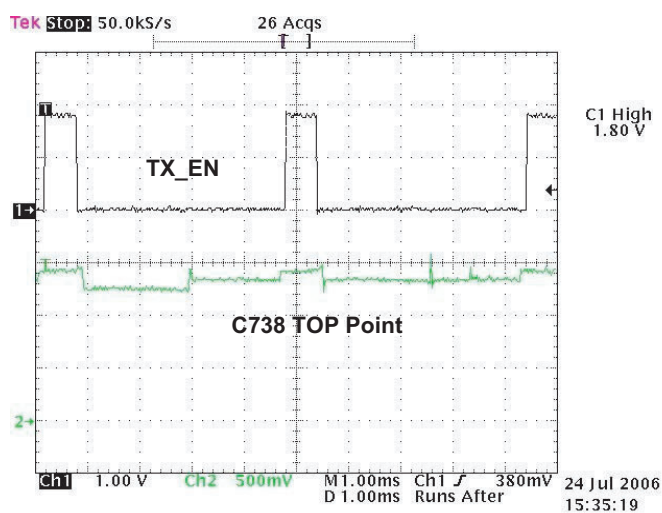
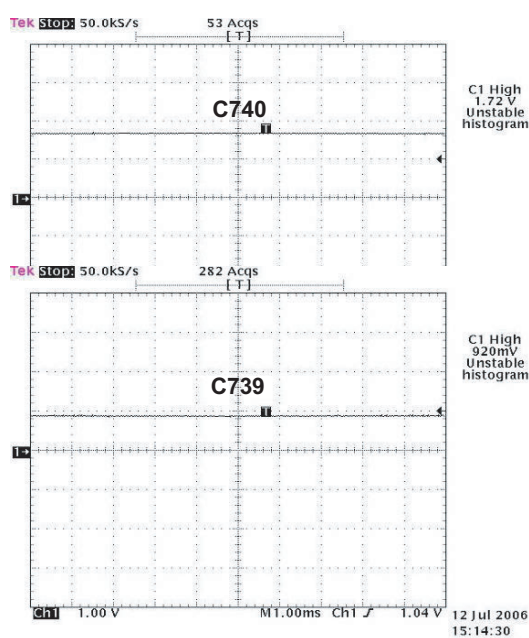
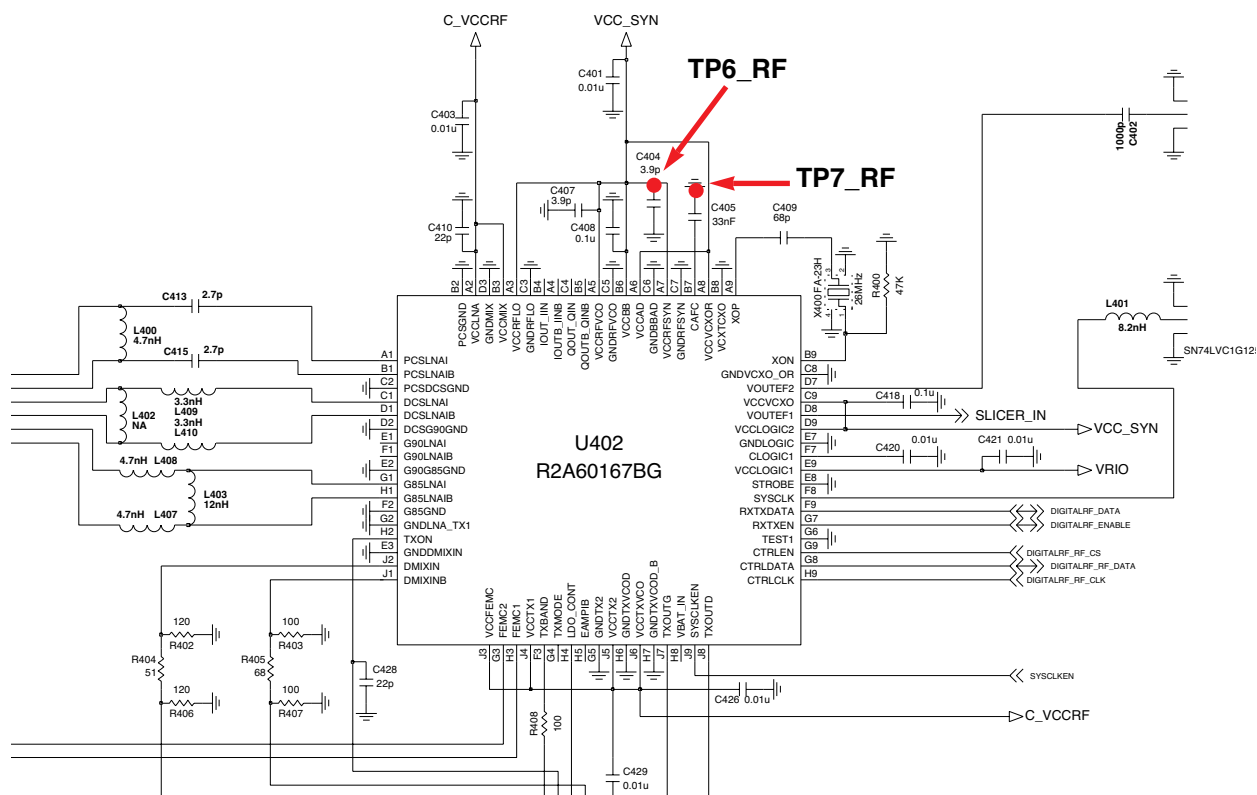


4.2.1.3 Mobile Switch & PAM & FEM Circuit



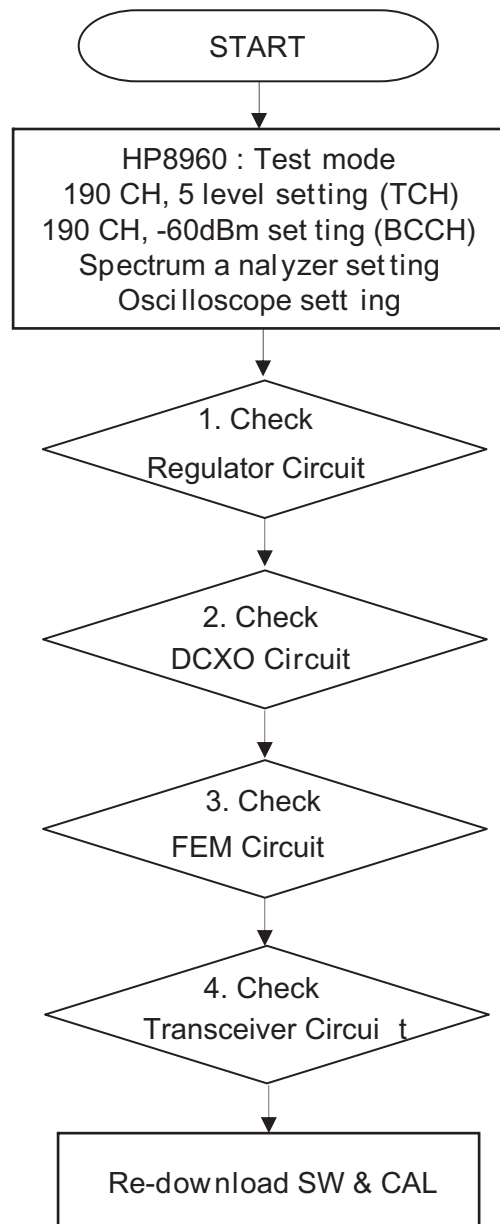
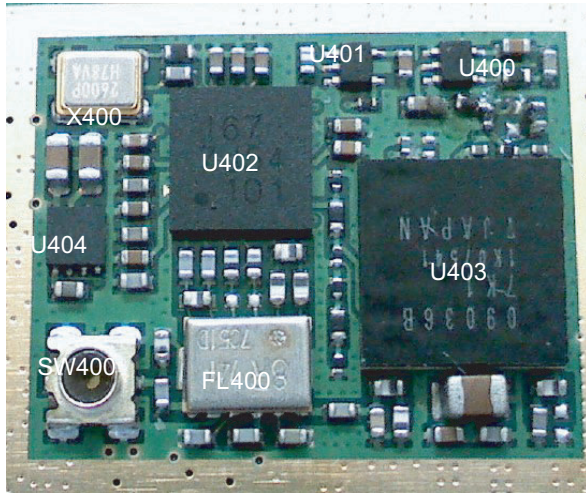


4.2.1.4 RF Main Transceiver Circuit

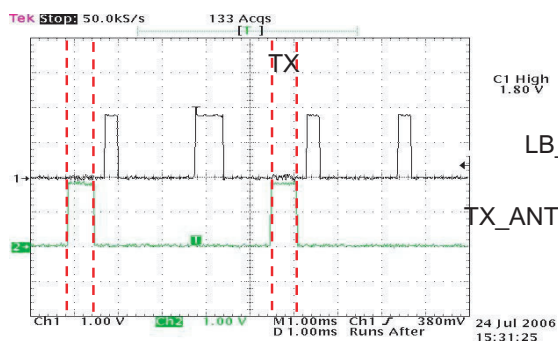
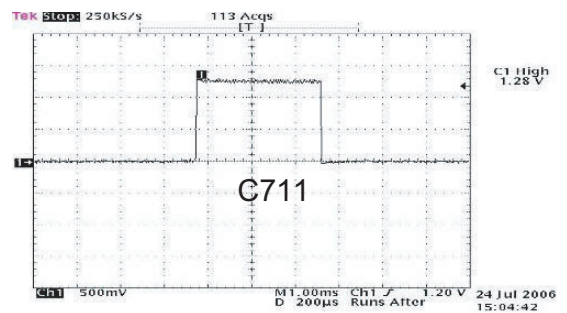
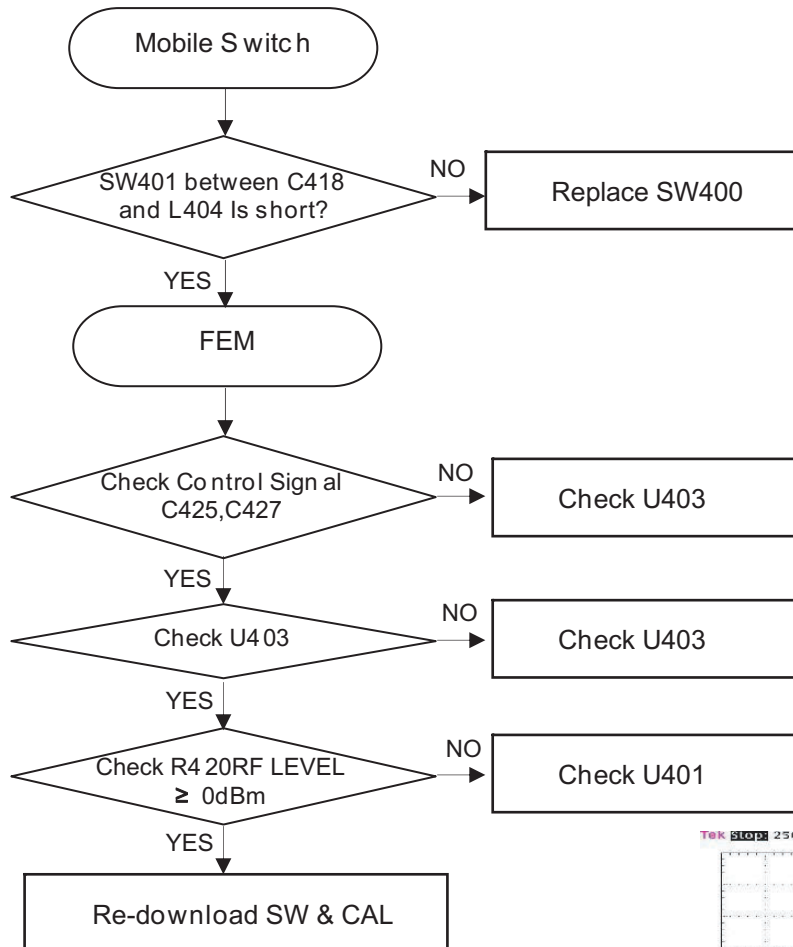


4. Trouble Shooting

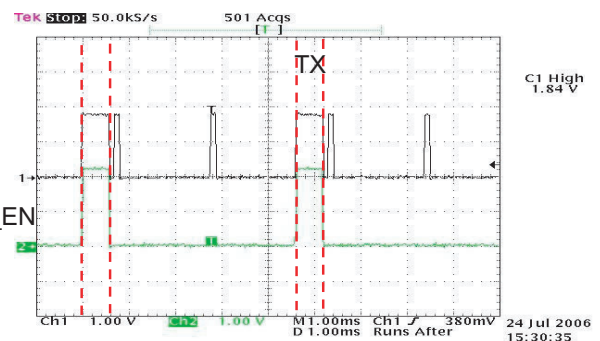
4.2.2 RF Transmitting Path Trouble Shooting



4.2.2.1 Mobile Switch & PAM & FEM Circuit



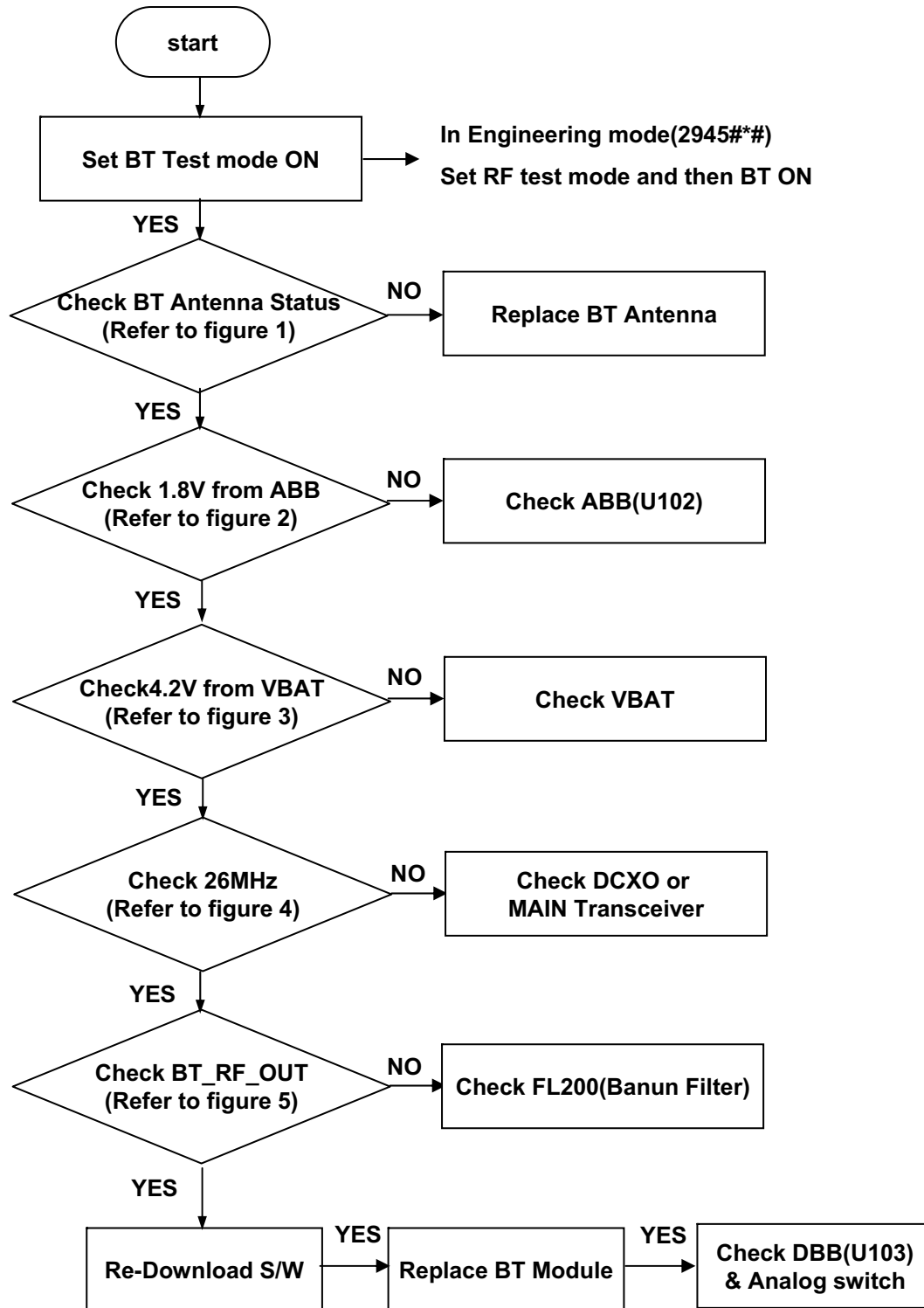
<GSM900>



<PCS1900>

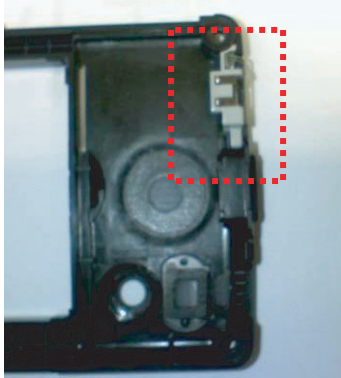
4. Trouble Shooting

4.3 Bluetooth Trouble Shooting

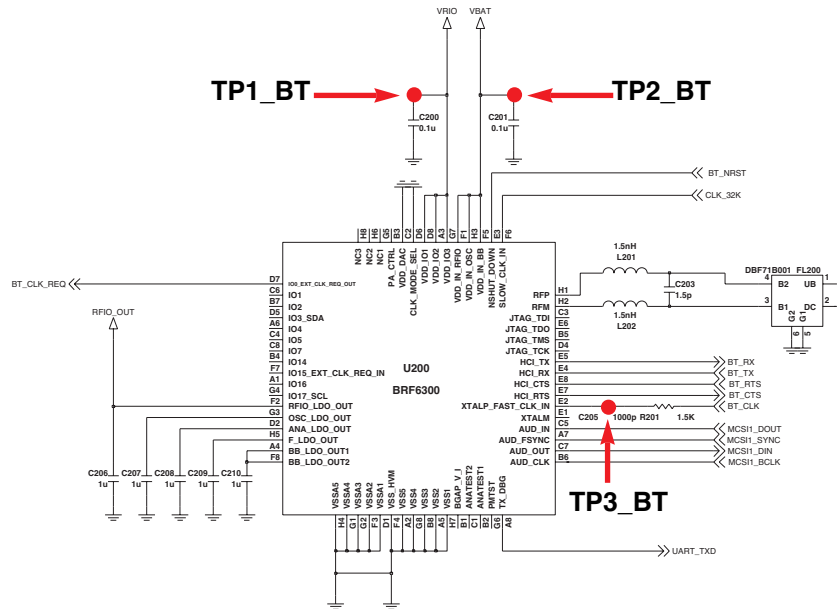


4.3.1 Checking BT Antenna

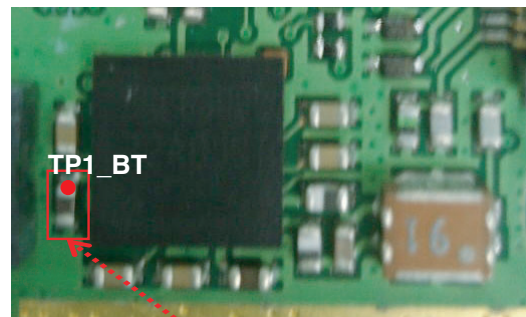
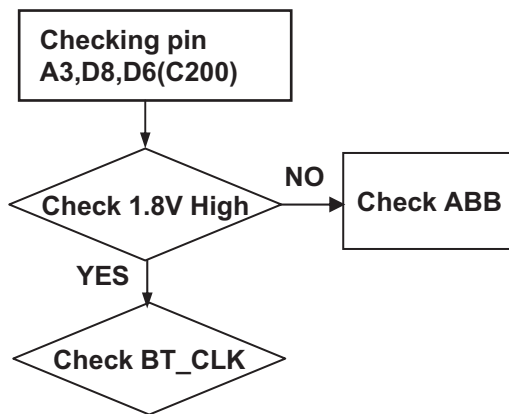
4.3.1.1 Visual Inspection



<Fig. 23> BT Antenna

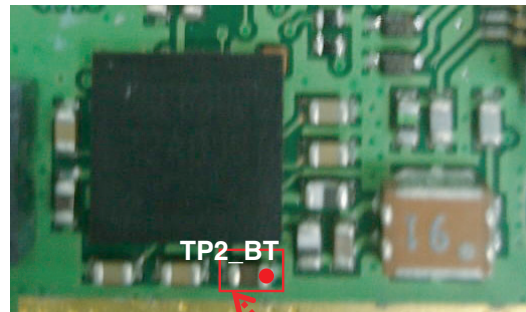
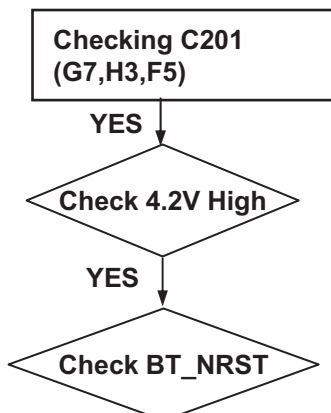


4.3.1.2 Checking BT VRIO



C200(1.8v)

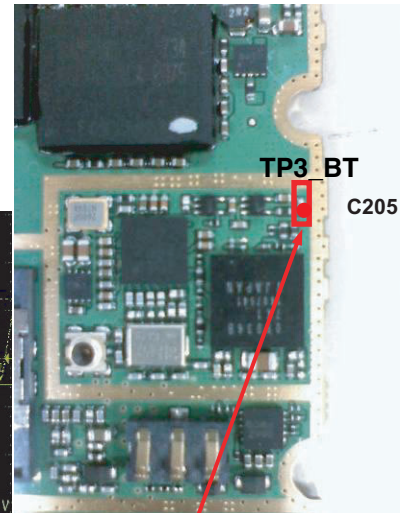
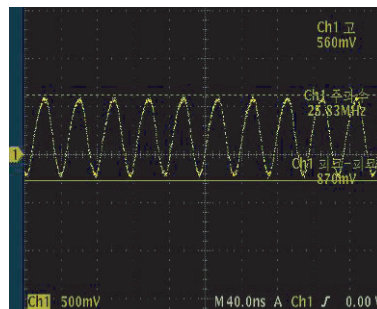
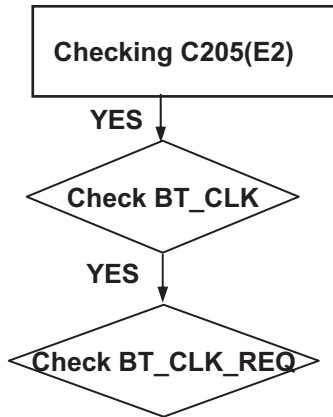
4.3.1.3 Checking BT_VBAT



C201(4.2v)

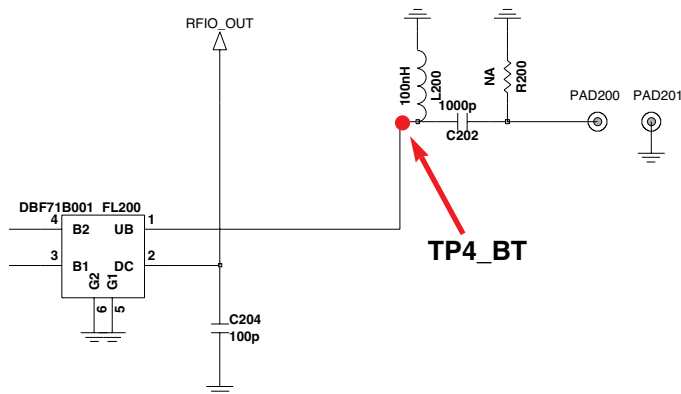
4. Trouble Shooting

4.3.1.4 Checking BT_CLK

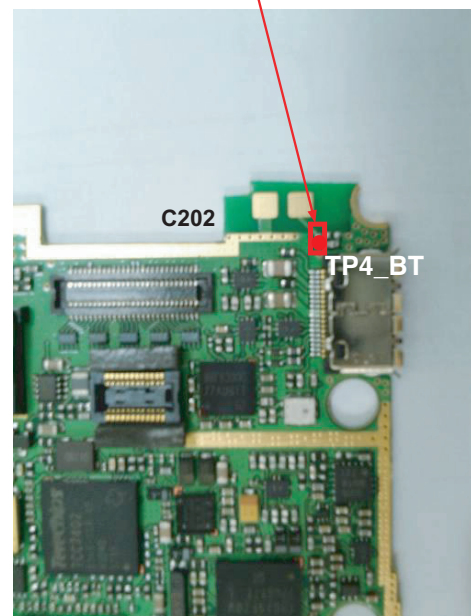
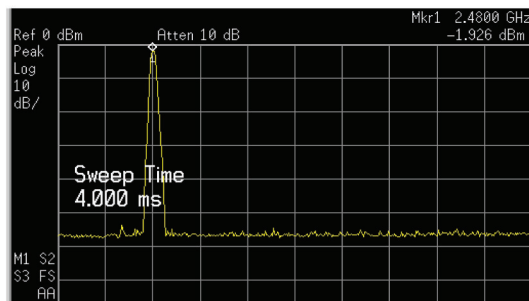


26MHz

4.3.1.5 Checking BT RF OUT



Check with Spectrum Analyzer in BT Equipment connection status.



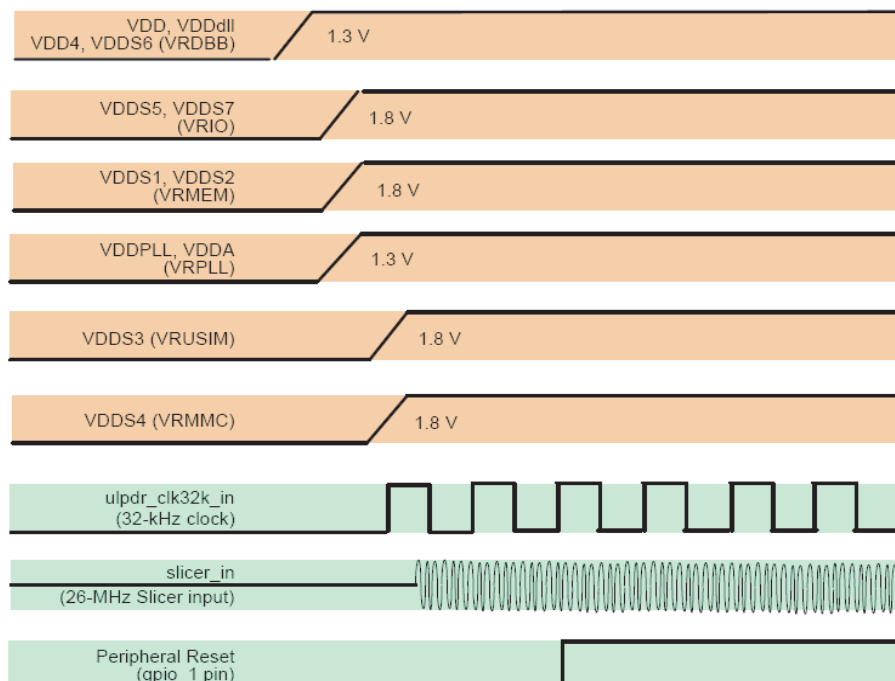
4.4 Baseband Part Troubleshooting

4.4.1 Power On Trouble

4.4.1.1 Power-On Trouble Troubleshooting

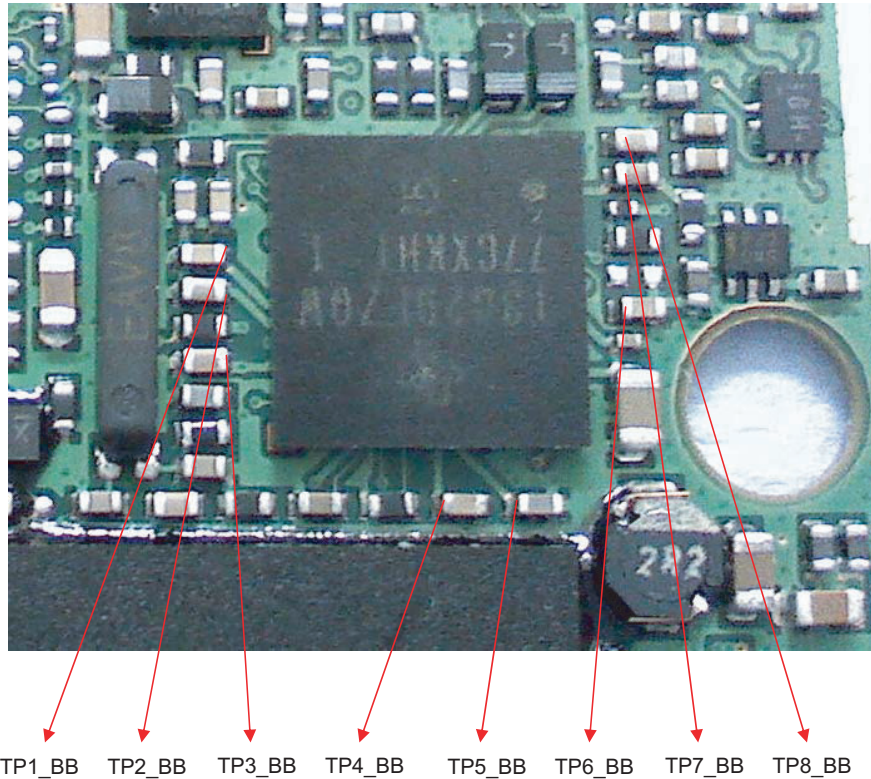
- Power-On Sequence
 - Connecting Battery
 - Power-On Key Detection
 - Pwon signal goes to ABB and then ABB resets DBB by ONOFF signal
 - ONNOFF turns low(0v) to High (2.8V) and it resets DBB (Neptune)
 - All LDOs (internal LDOs of ABB and external LDOs) are turned on
- Check Points
 - Battery Voltage
 - Power-On Key Detection (Pwon signal)
 - Output of LDOs
- Trouble Shooting Setup
 - Connect PIF-UNION to the phone.
 - Set the TI-remote switch at PIF-UNION off.
- Trouble Shooting Procedure
 - Check Battery Voltage
 - END_KEY Dome Switch condition& Side FPCB condition
 - Check the output voltages of all LDOs.

* DBB Power-On Trouble Troubleshooting



4. Trouble Shooting

4.4.2 Check Point



<Fig. 24> Triton Power Supplies

C150: VRDBB =>1.4V/1.08V

C126: VREXTL =>1.8V

C127: VREXTH => 2.8V, TEMP_SENSE

C128: VRMMC => 2.85V, T-flash

C129: VRSIM =>1.8 / 2.85V, SIM

C130: VRUSB =>3.3v

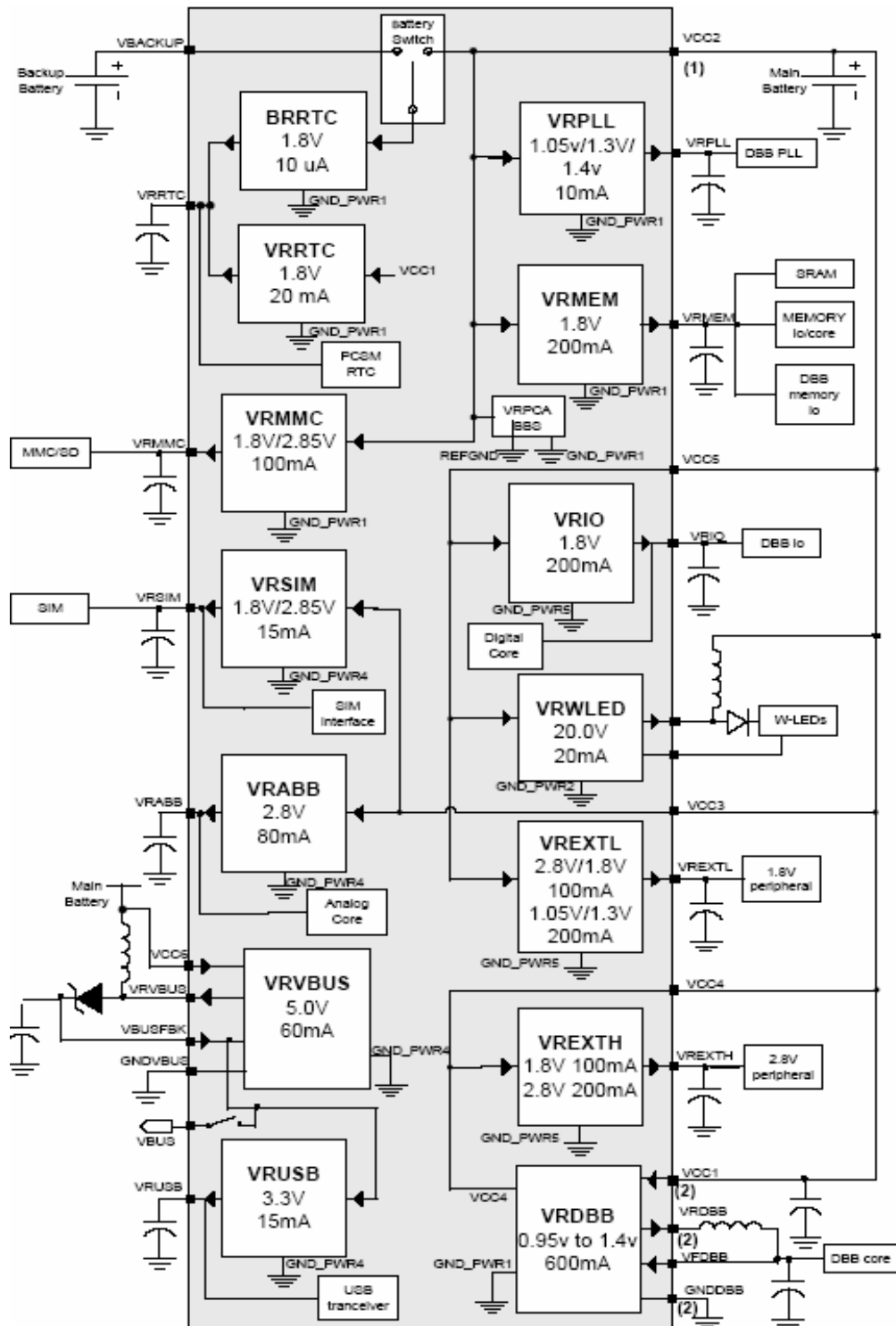
C131: VRRTC => 1.8v

C132: VRIO => 1.8v

C133: VRABB => 2.8v

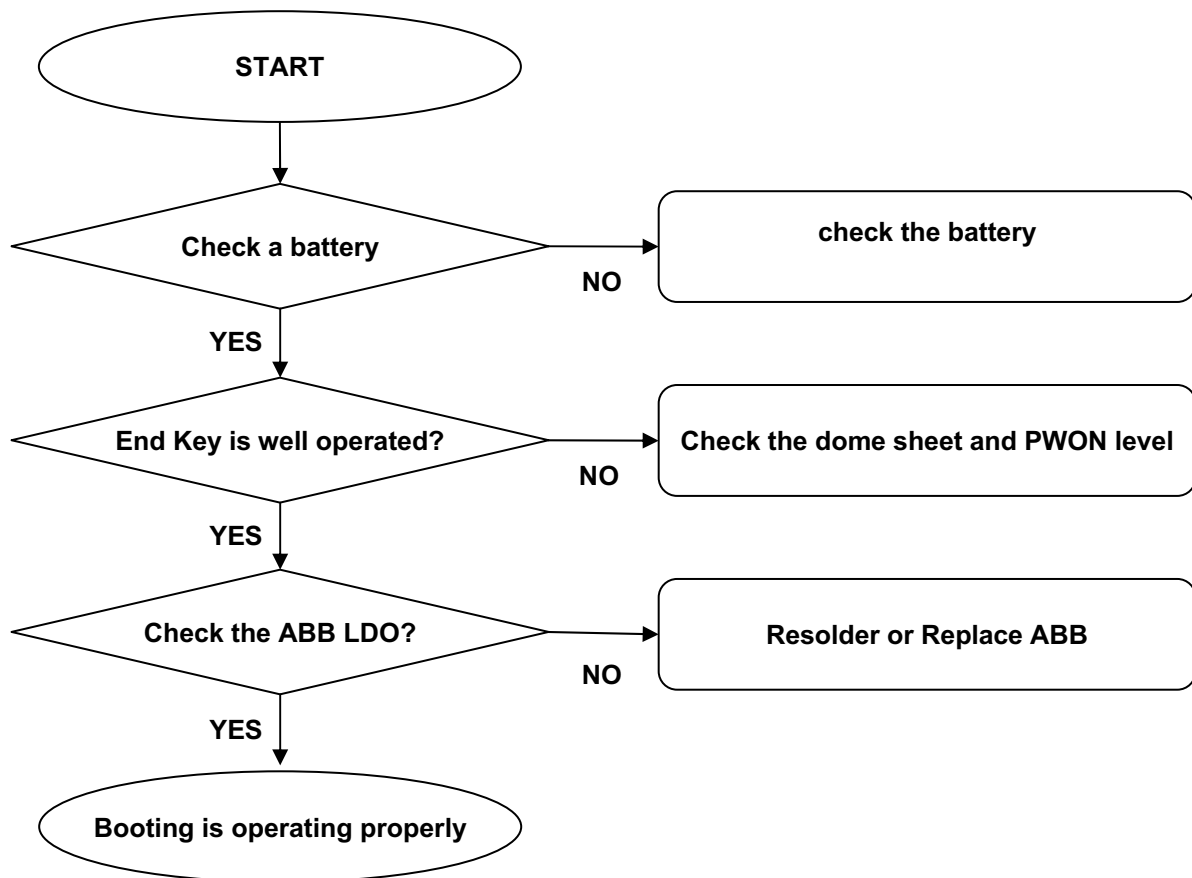
C134: VRMEM => 1.8v

C135: VRPLL => 1.3v / 1.4v / 1.05v



<Fig. 25> Triton Power Supplies

4. Trouble Shooting



4.4.3 Charging Trouble Shooting

- Charging method: CC-CV
- Charger Detection Voltage: About 4.0V
- Charging Time: About 3H under
- Charging Current: About 550mA
- Cut-off Current: 80mA
- Low Battery Alarm
 - Talk mode: 3.45V
 - Talk mode: 3.45V
- Switch-Off Voltage: 3.35
- Charging Temperature ADC Range
 - ~ -20°C: Small charging operation
 - -20°C ~ 60°C: Charging
 - 60°C ~: Not charging operation small charging operation

Battery ICON



3.74V± 0.05V



3.64V± 0.05V



3.50V± 0.05V



3.45V± 0.05V

4. Trouble Shooting

4.4.4 Charging Current

- Charging Procedure

- Connecting TA & Charger Detection
- Control the charging Current by CHARGER IC
- Charging Current flow into the Battery

- Check Points

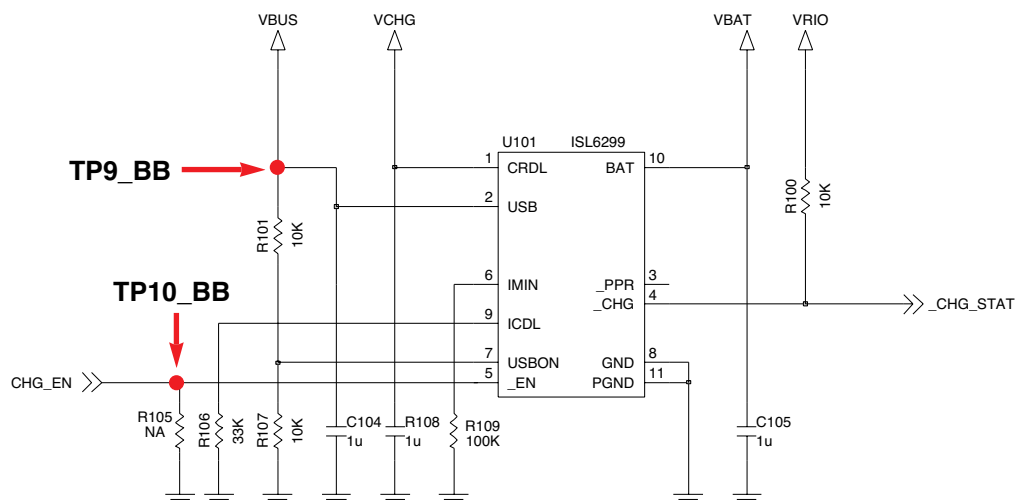
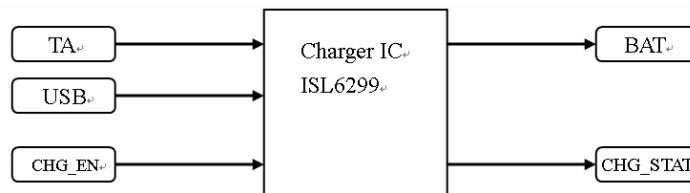
- Connection of TA
- Charger IC
- Battery

- Trouble Shooting Setup

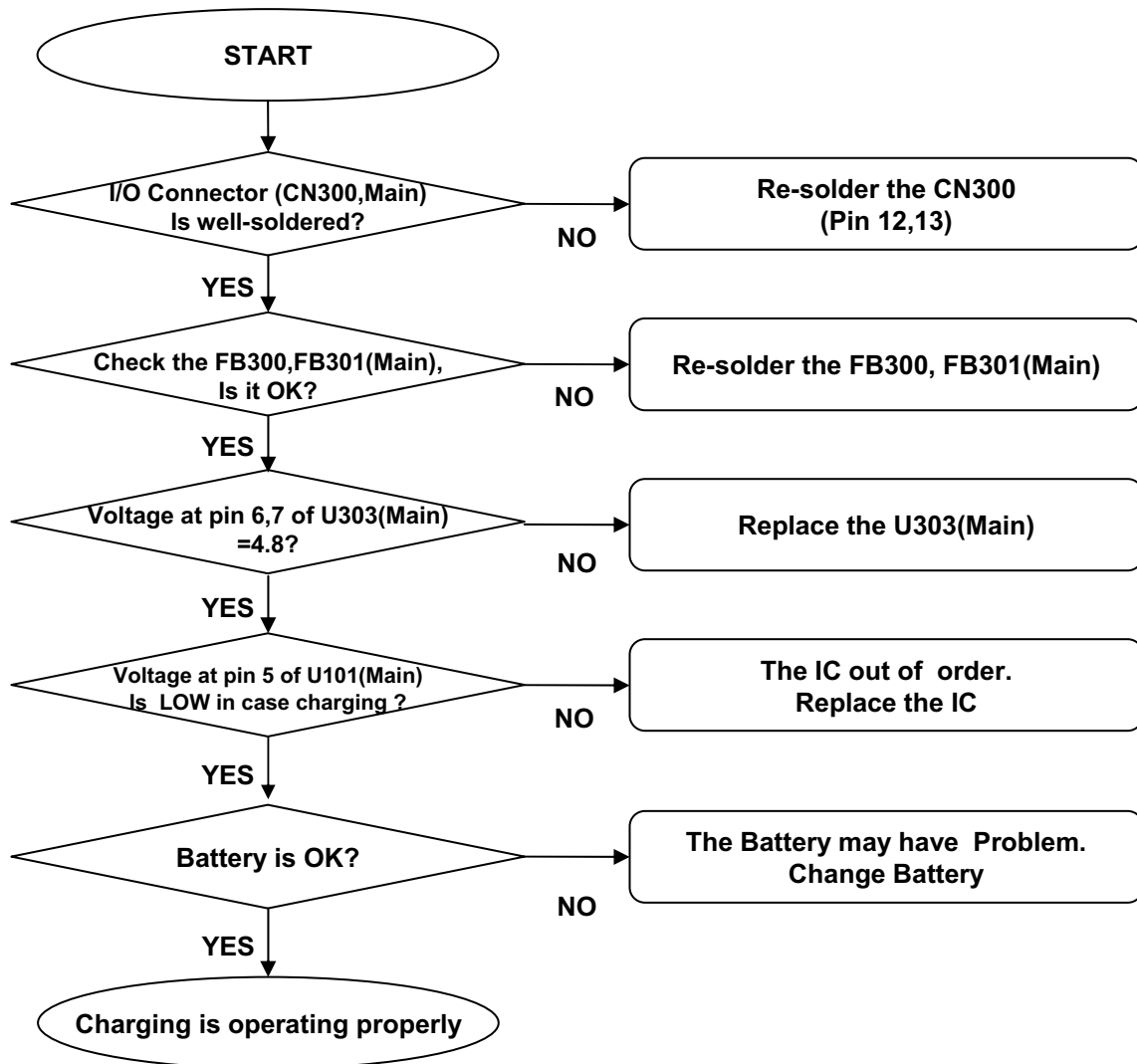
- Connect Battery & TA to the handset

- Trouble Shooting Procedure

- Check the charger connector
- Check the charging current path
- Check the battery

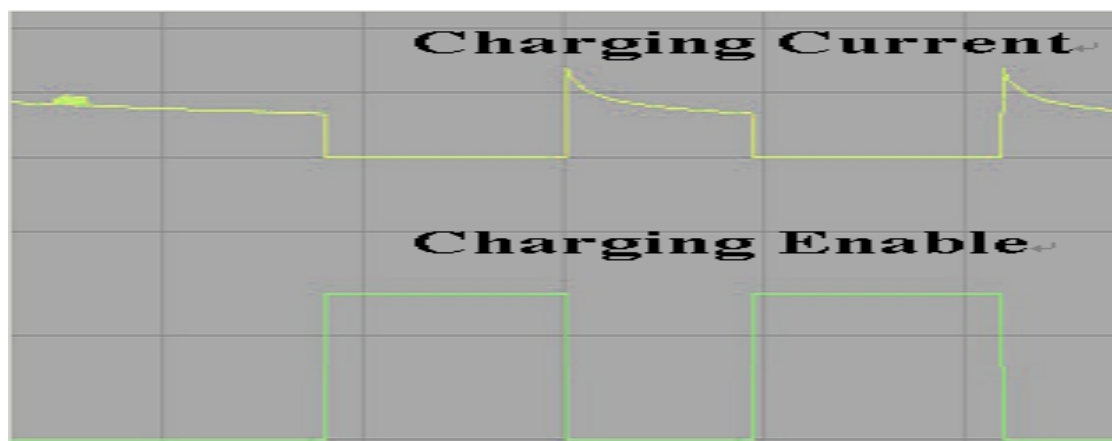


4. Trouble Shooting



4. Trouble Shooting

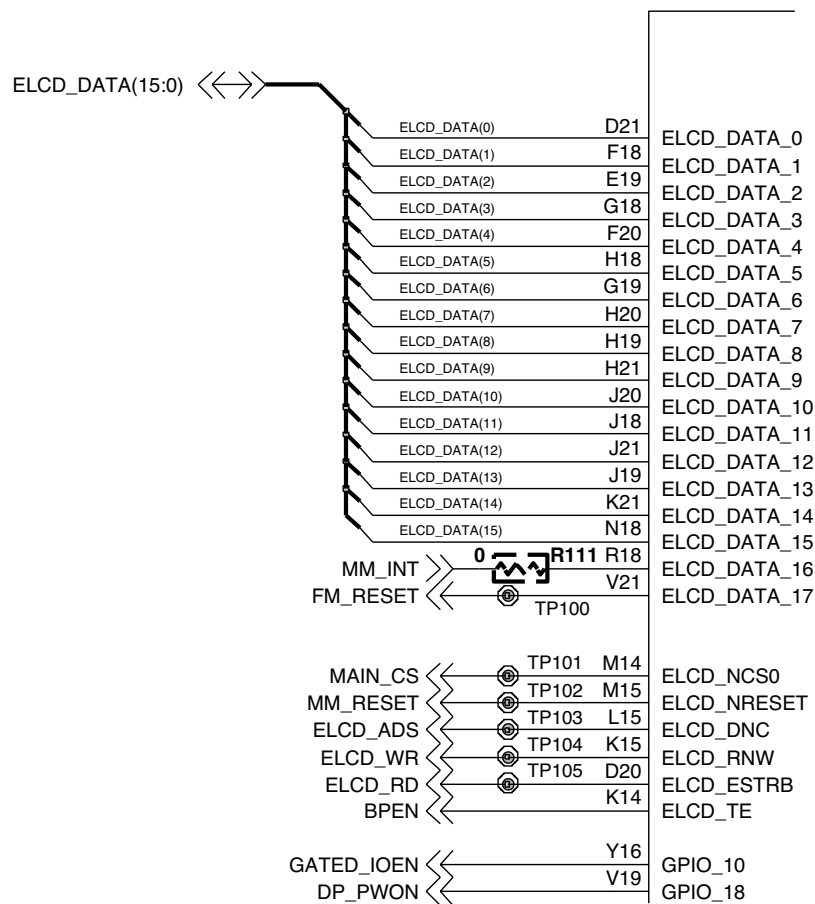
Charging Graph



While Charging enable is low, the charging scheme is operated.

4.5 LCD Display Trouble shooting

- LCD Control signals from Main Board
 - The signal of DBB is ELCD_DATA(16BIT), ELCD_CS/WR/ADS, ELCD_CS,
 - LCD MODULE POWER SOURCE and LCD reset.
 - The signal of TCC are composed of LCD_DATA(16BIT) and LCD_CS/WR/ADS

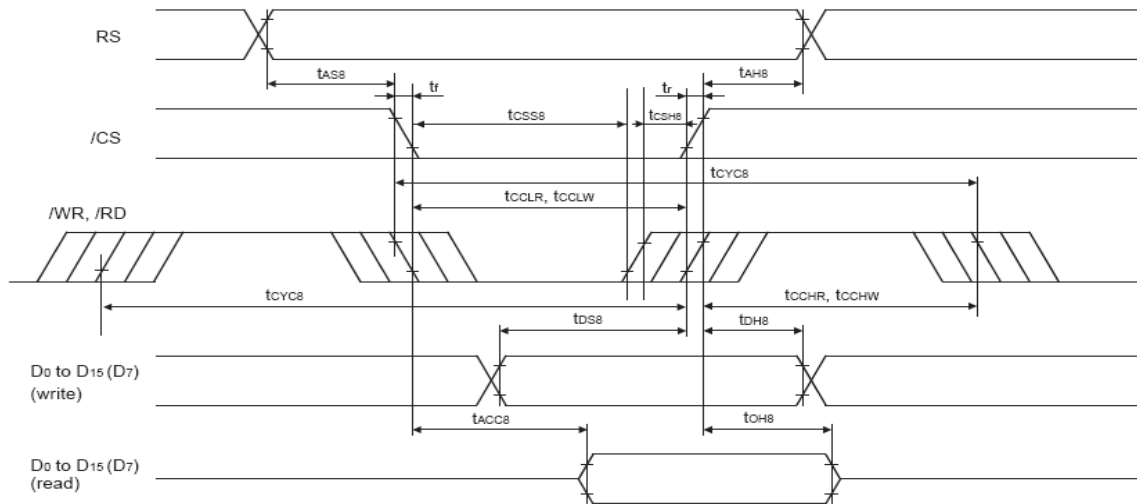


- Check Point
 - The Assembly status of the LCD Module
 - The Soldering of connector
 - The FPCB which connects the LCD Module
- Trouble Shooting Setup
 - Connect PIF Jig, and Power on

4. Trouble Shooting

LCD Timing Diagram

(c) i80 CPU interface

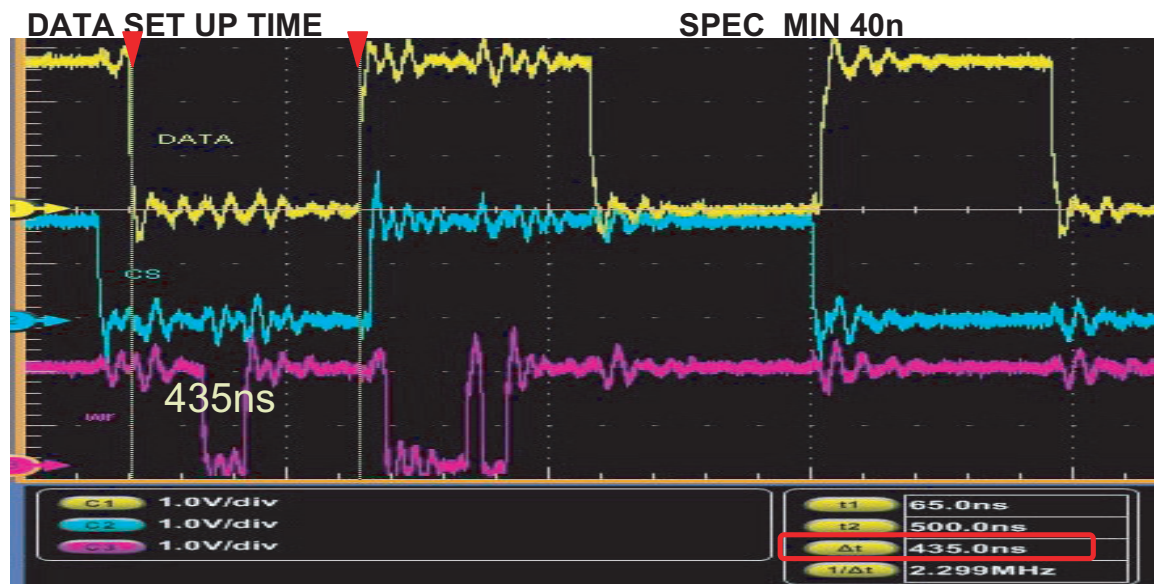


V_{CCIO} = 1.65 to 3.3 V

Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Address hold time	t_{AHs}	RS	10			ns
Address set-up time	t_{ASs}	RS	0			ns
System cycle time	t_{CYC8}	Read	400			ns
		Write, horizontal writing (INC(D2 of R5) = 0)	50			ns
		Write, vertical writing (INC (D2 of R5) = 1)	50			ns
Control low level pulse width (/WR)	t_{CCLW}	/WR	20			ns
Control low level pulse width (/RD)	t_{CCLR}	/RD	200			ns
Control high level pulse width (/WR)	t_{CCHW}	/WR	20			ns
Control high level pulse width (/RD)	t_{CCHR}	/RD	80			ns
Data set-up time	t_{DSs}	D ₀ to D ₁₇	40			ns
Data hold time	t_{DHs}	D ₀ to D ₁₇	0			ns
CS set-up time	t_{CSSs}	CS Write	35			ns
		CS Read	200			ns
CS hold time	t_{CSHs}	CS Write	0			ns
		CS Read	20			ns
/RD access time	t_{ACC8}	D ₀ to D ₁₇ , C _L = 100 pF			200	ns
Output disable time	t_{OHs}	D ₀ to D ₁₇			100	ns

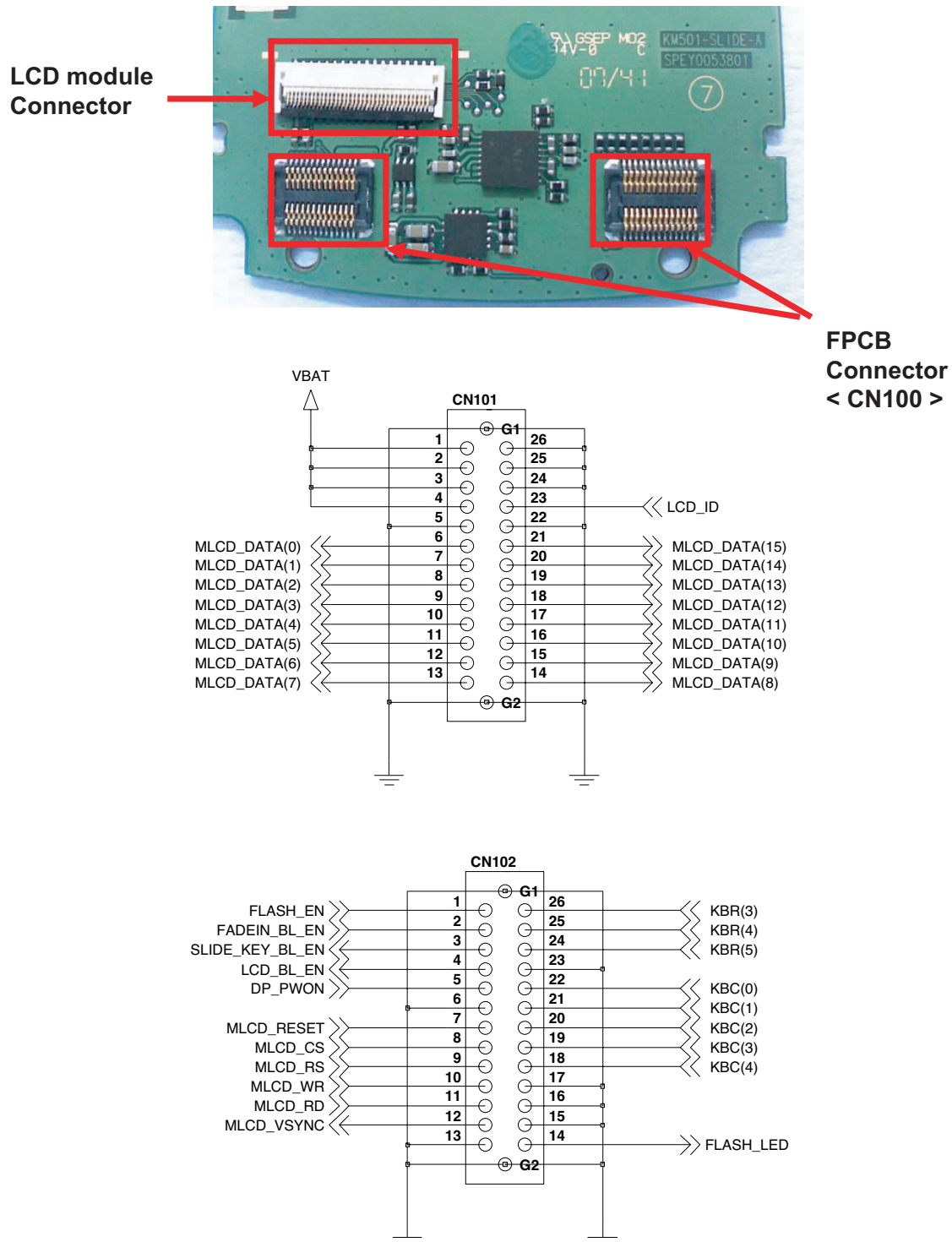
4. Trouble Shooting

LCD Timing Diagram

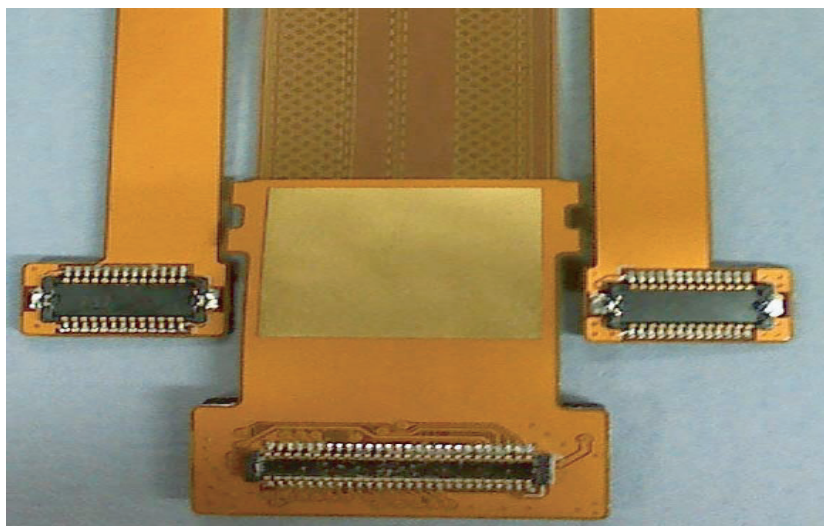


4. Trouble Shooting

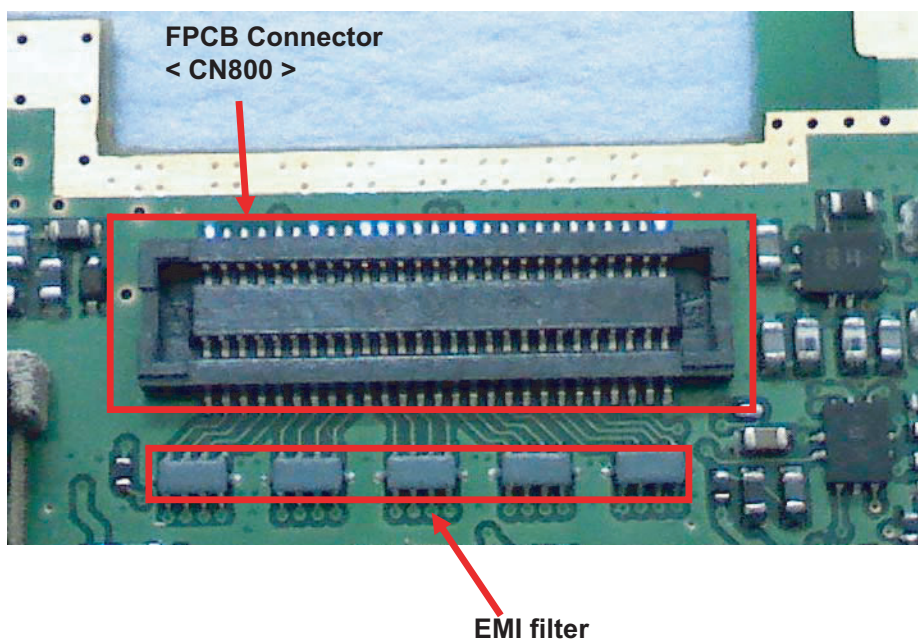
4.5.1 Check Point #1 - Slide key PCB



4.5.2 Check Point #2 - FPCB

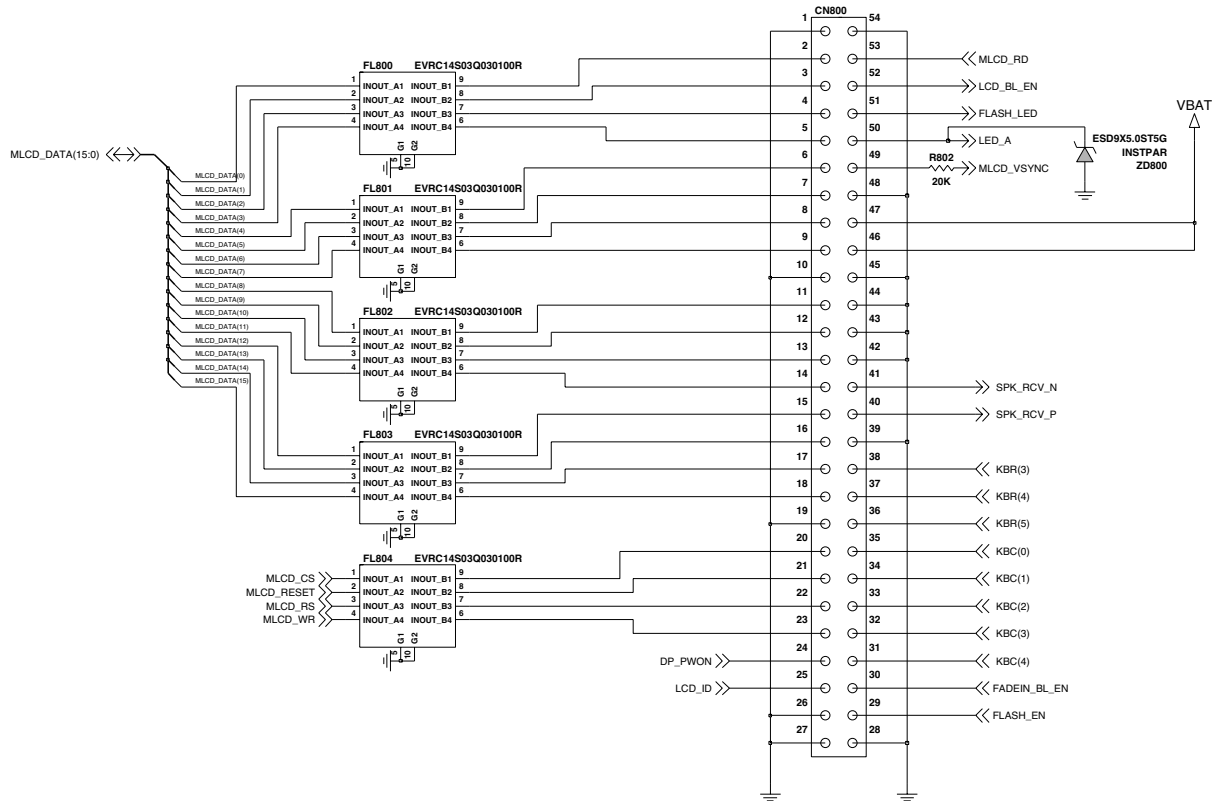


4.5.3 Check Point #3 - Main PCB



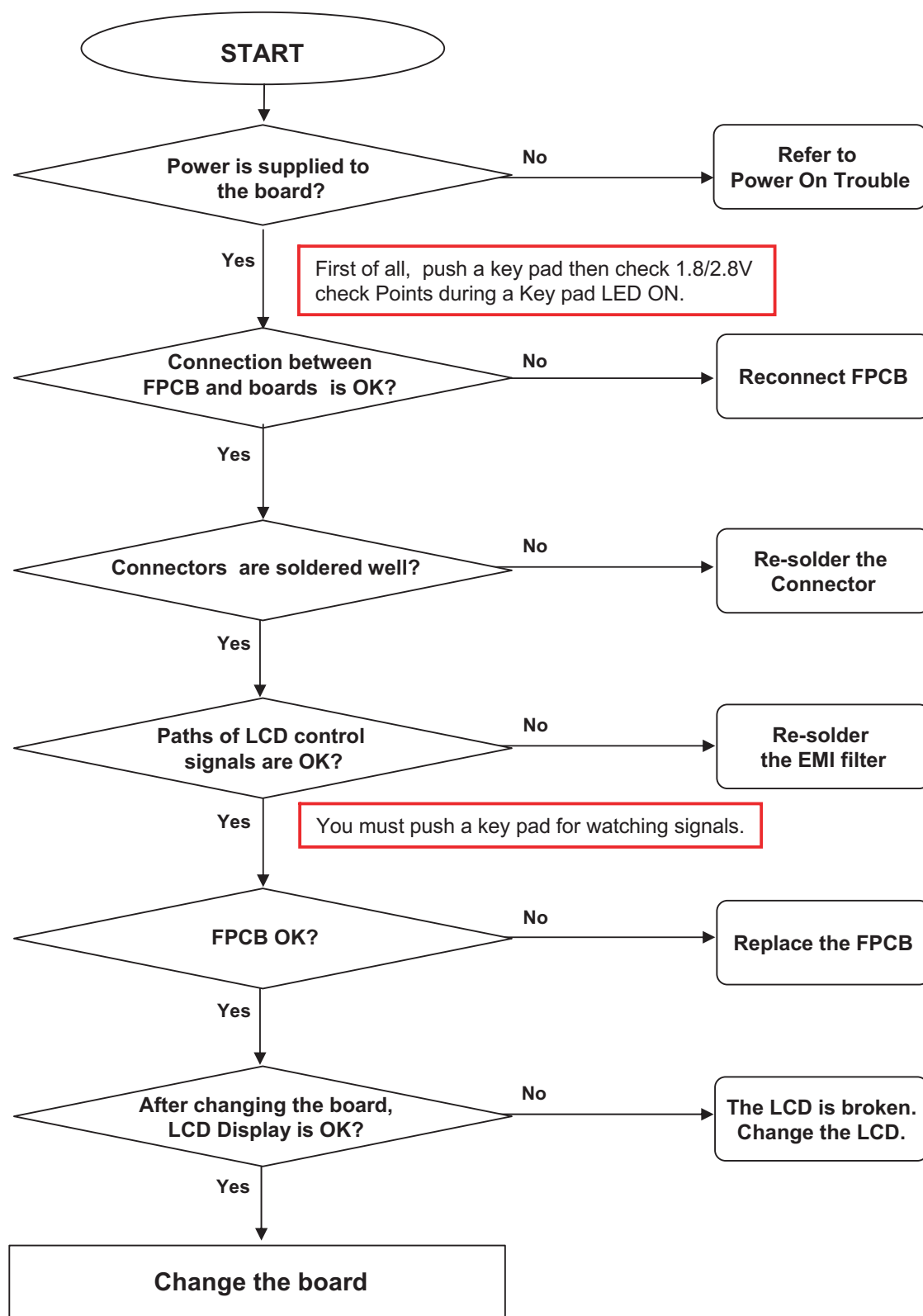
4. Trouble Shooting

< Connection of Main PCB >



- You must check signals LCD Connector Side of a Main FPCB because you could check final signal states through EMI Filter, connector, FPCB and etc.

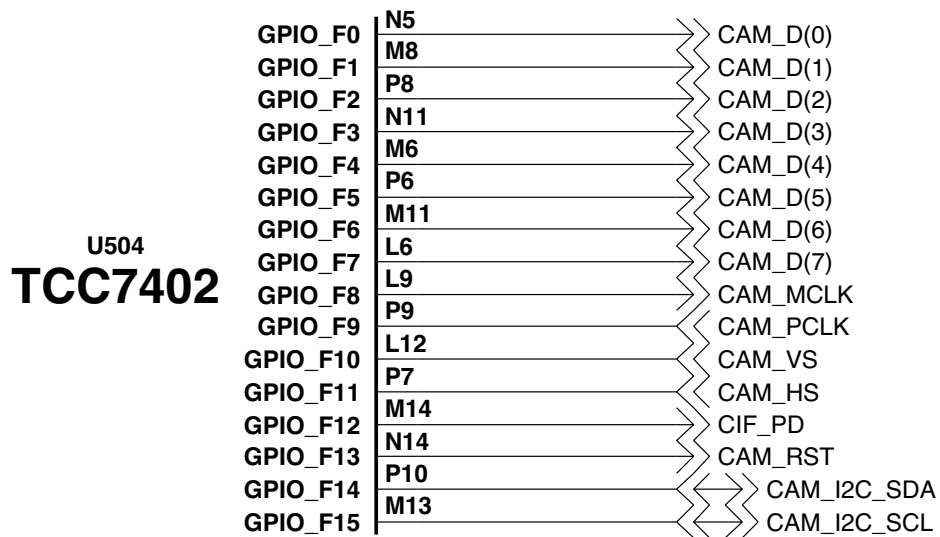
4. Trouble Shooting



4. Trouble Shooting

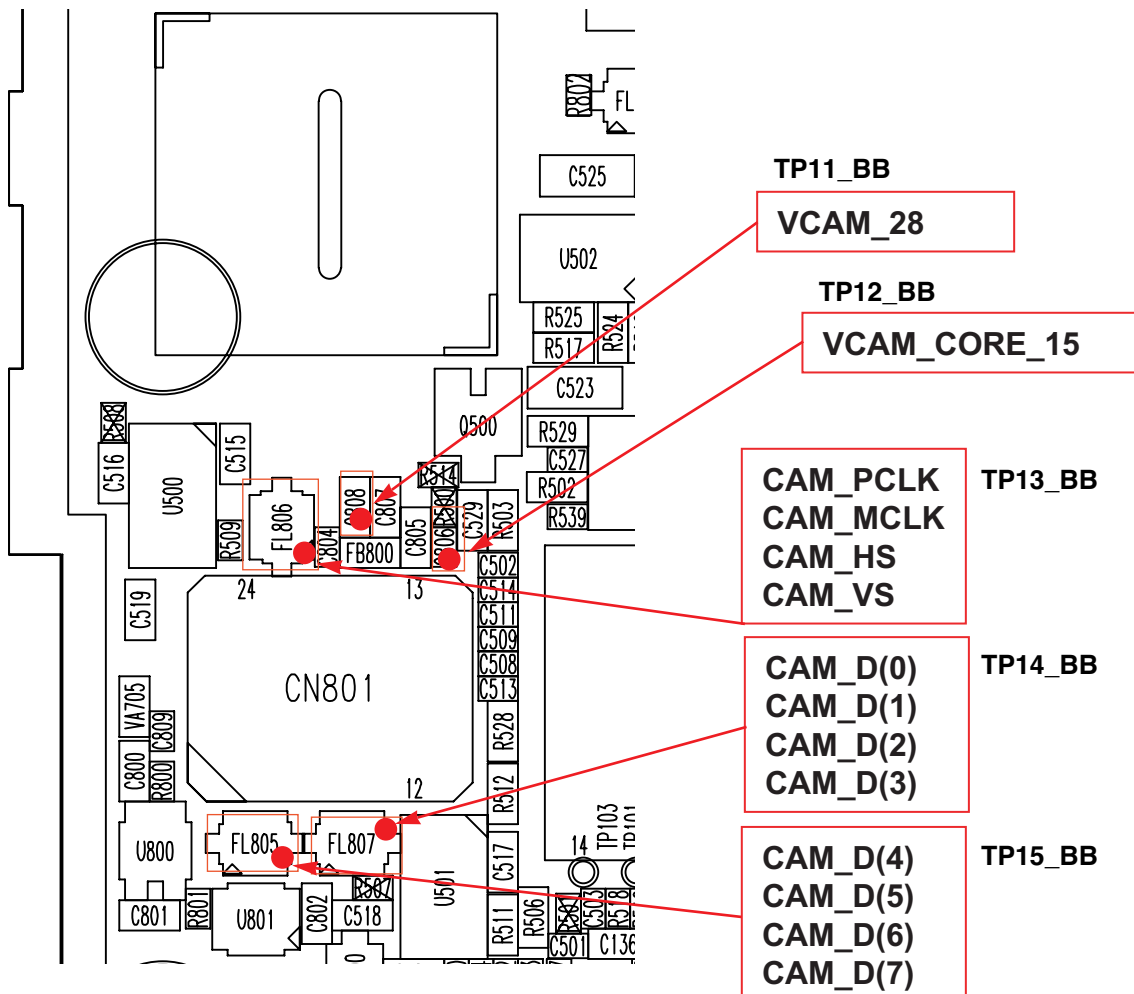
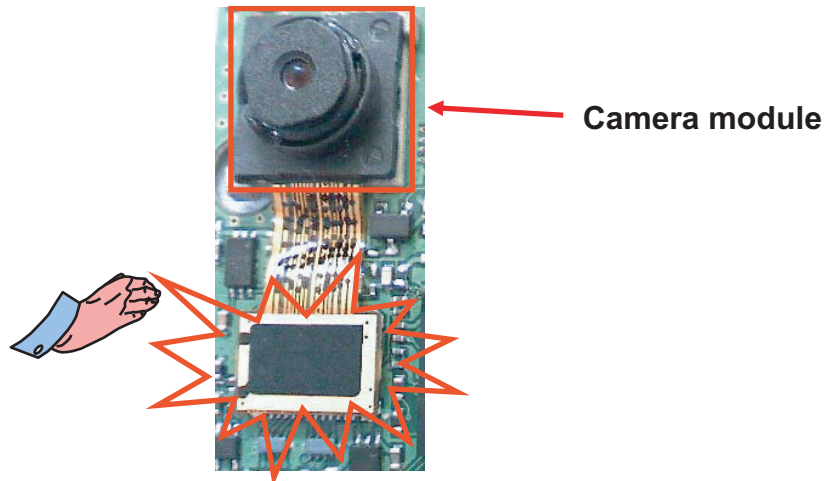
4.6 Camera Trouble Shooting

- Camera signals from Main Board
 - CAM_RST, CAM_MCLK, CAM_PCLK, CAM_VS, CAM_HS, CIF_PD, CAM_D(0) ~ D(7)



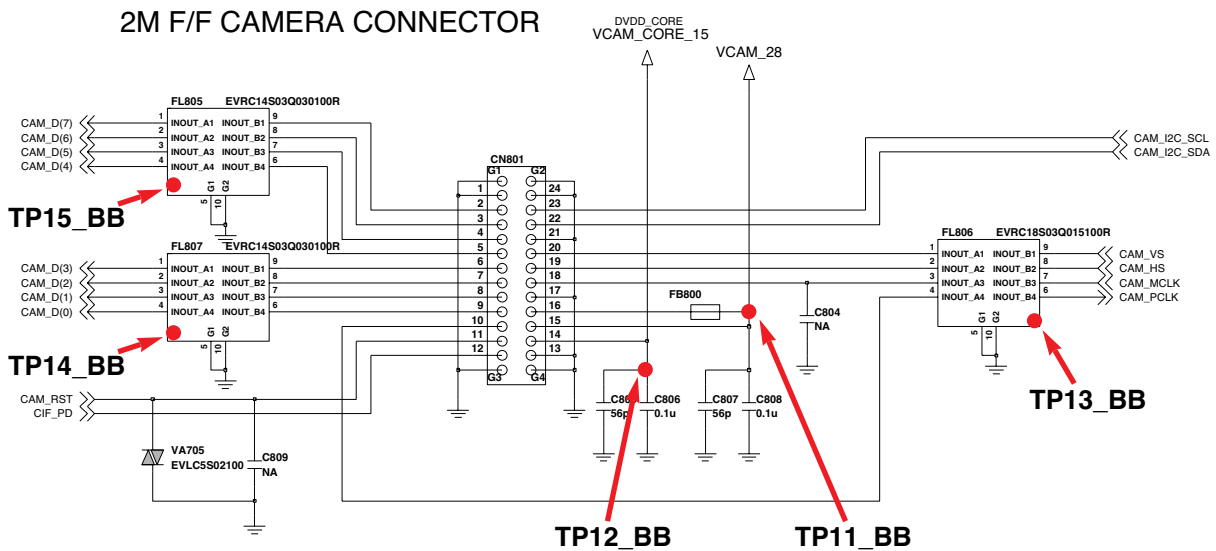
- Camera signals from Main Board
 - Check the power supply
 - Check the soldering of Components
 - Check the CAMERA signals
- Trouble Shooting Setup
 - Enter the engineering mode.
 - Go to menu '2.Baseband → 3.Camera → 1.Main LCD Preview'

4.6.1 Check Point #1 - Connection of Camera Module

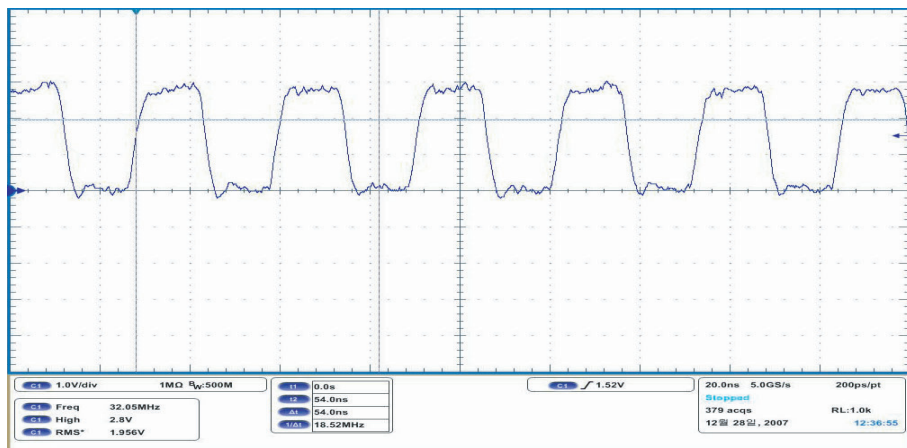


4. Trouble Shooting

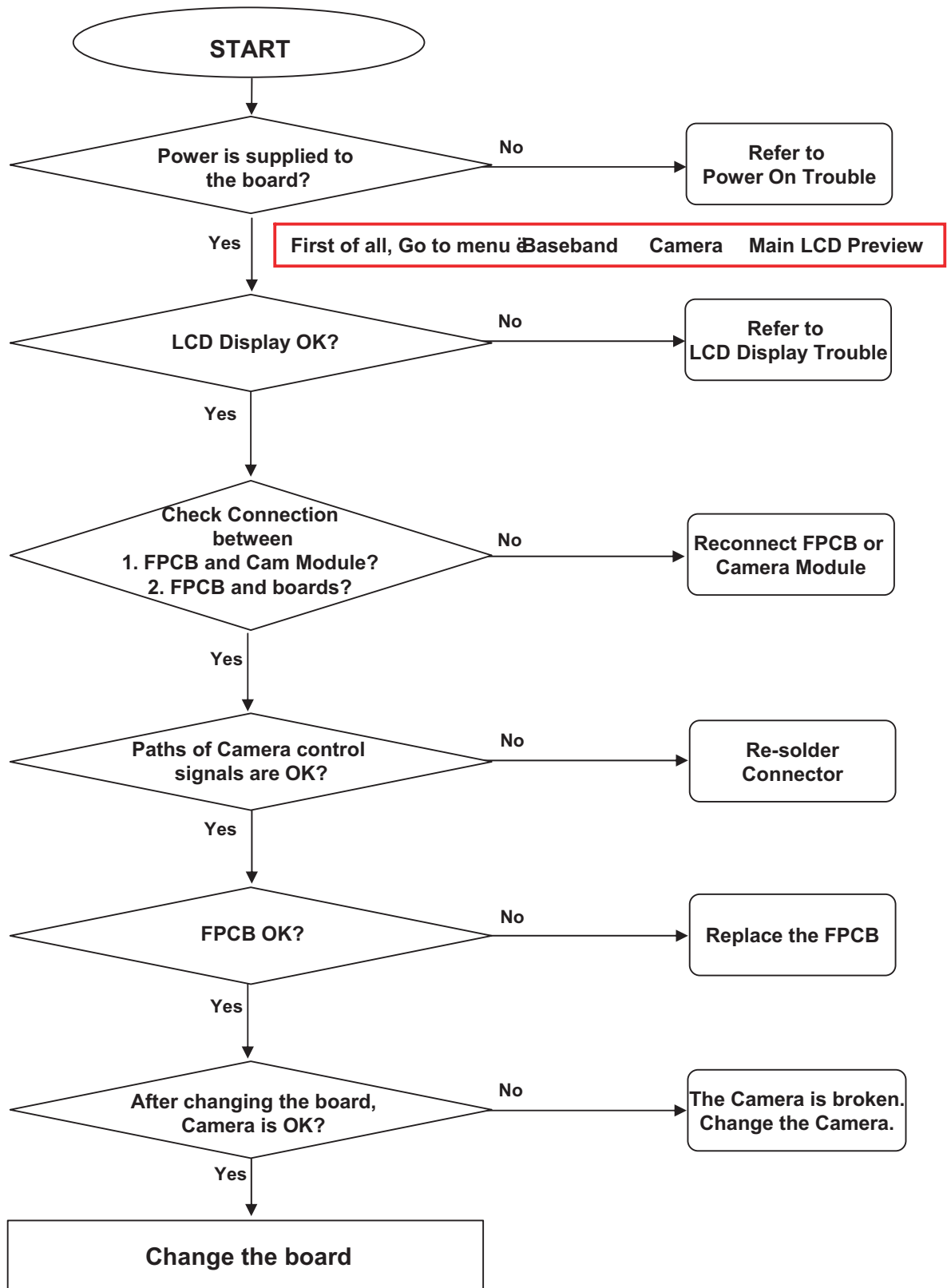
< CN801 Connection of Main PCB >



- You must check camera signals at a Connector Side of a Main PCB because you could check final signal states through connector.



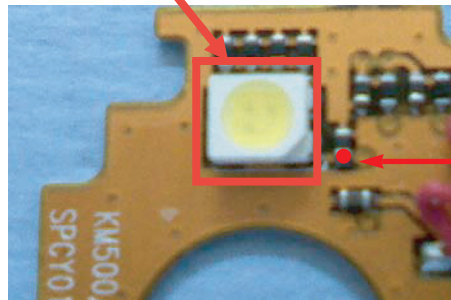
4. Trouble Shooting



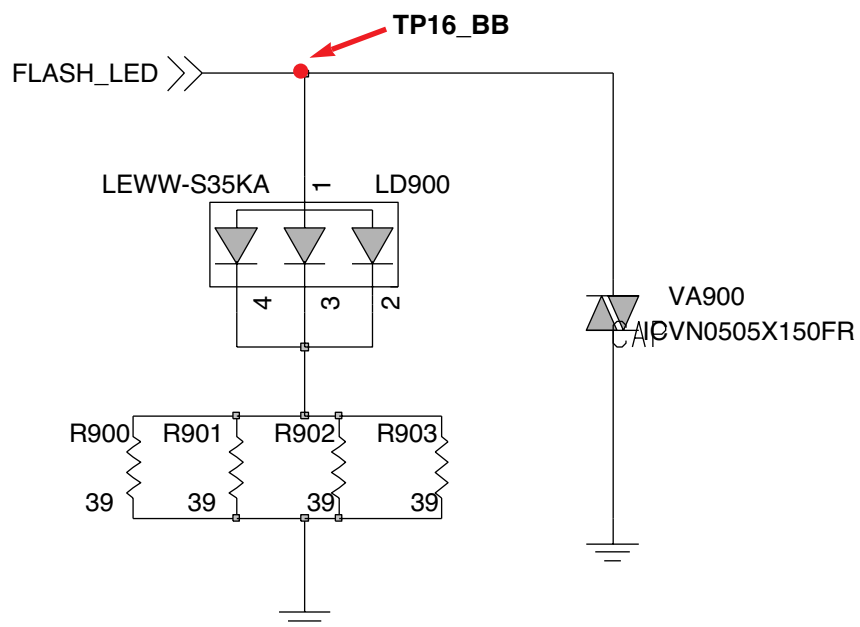
4. Trouble Shooting

4.7 Flash LED Trouble Shooting

Flash LED

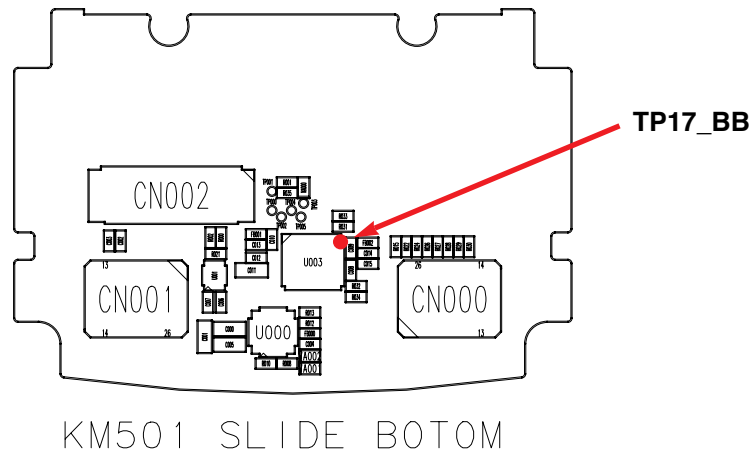
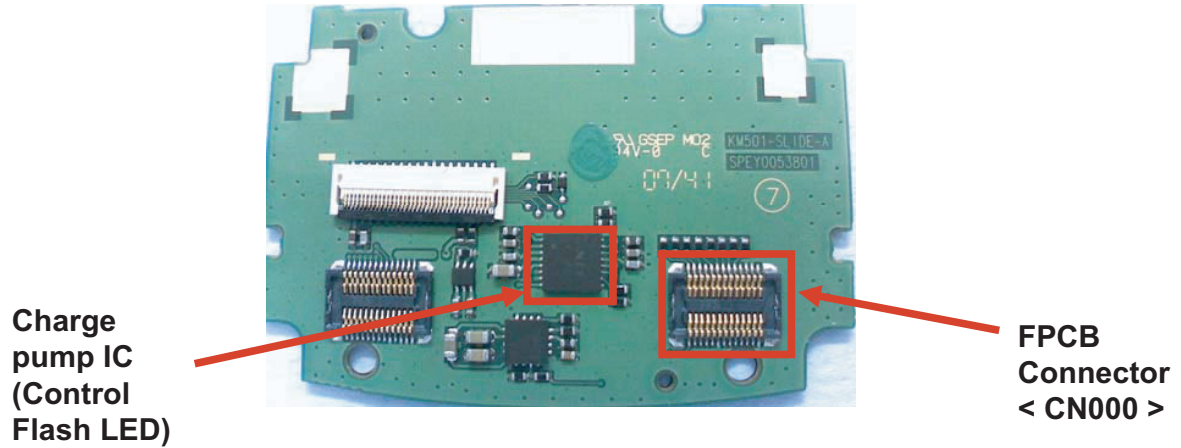


TP16_BB

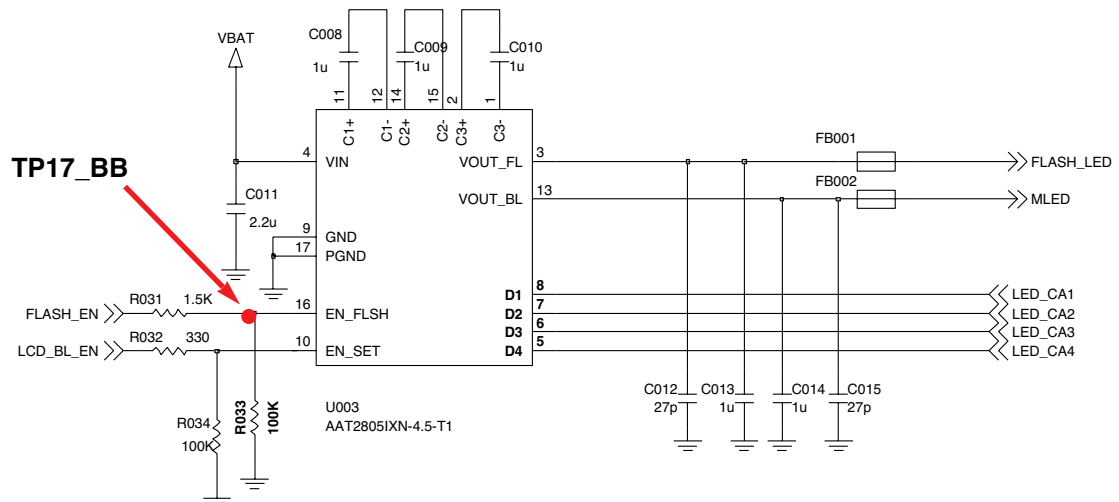


- Check Point
 - Check the connection status
 - Check the soldering of Components
 - Check the FLASH_LED signal

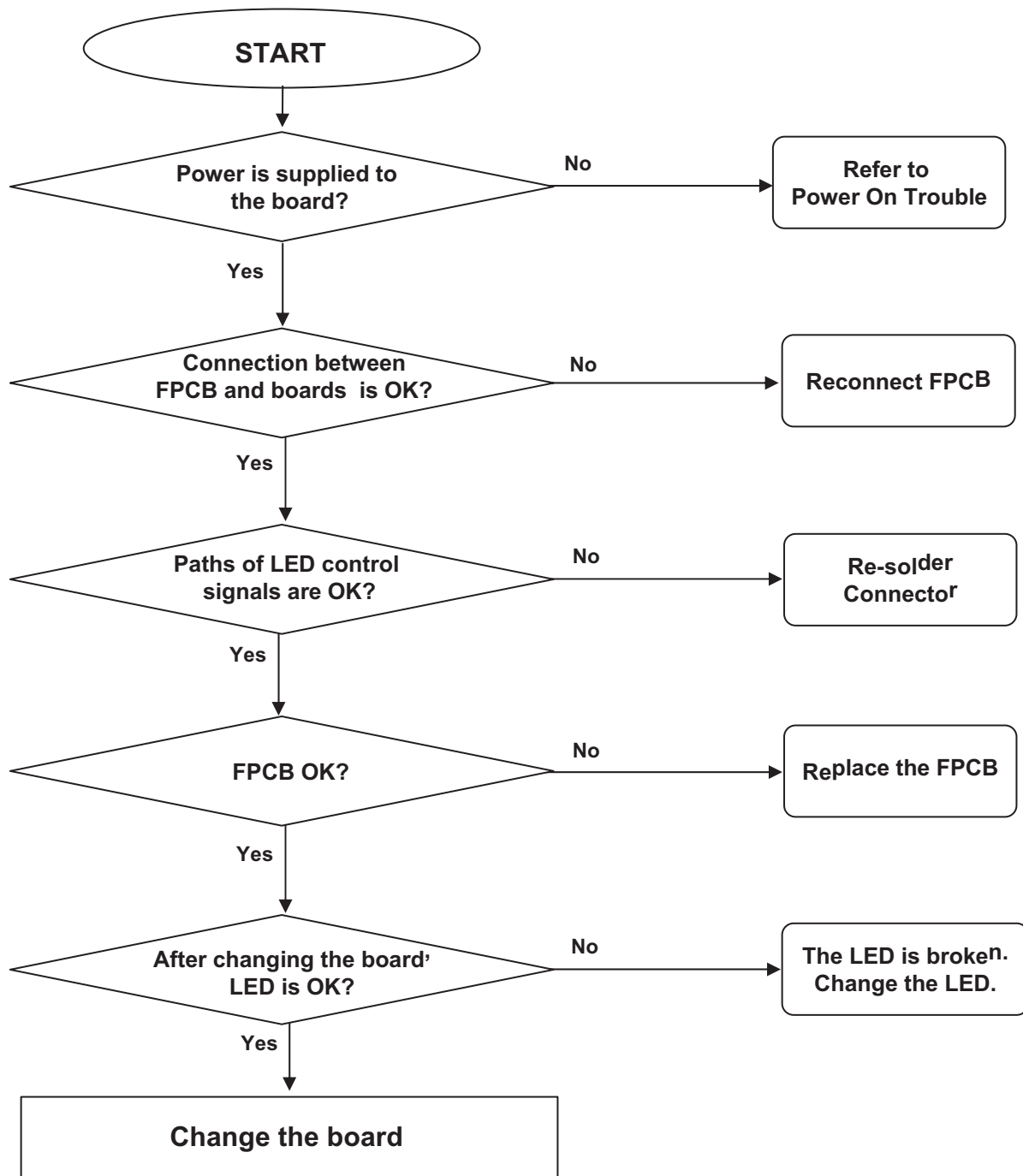
4.7.1 Check Point #1 - Slide key PCB



< U000 Connection of Slide key PCB >



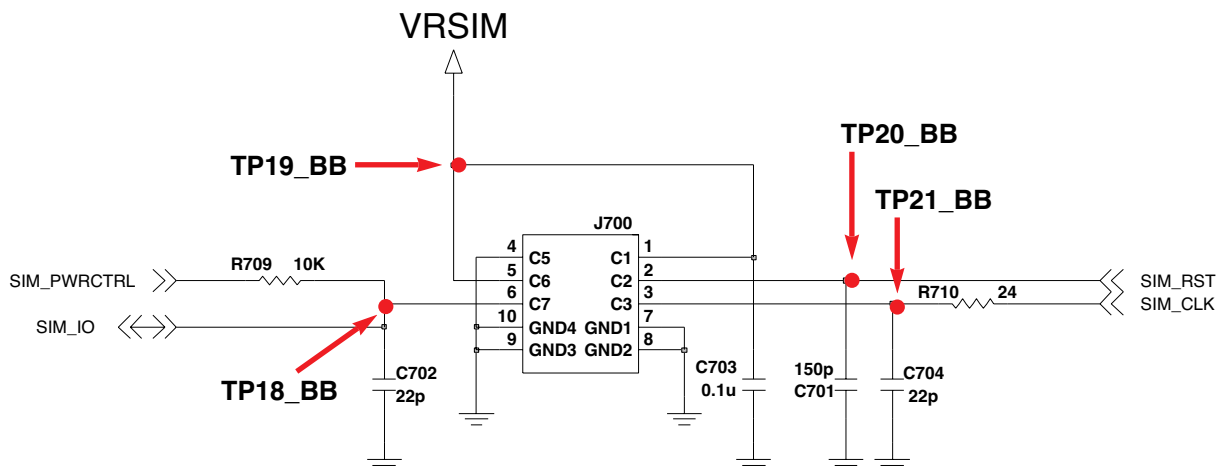
4. Trouble Shooting



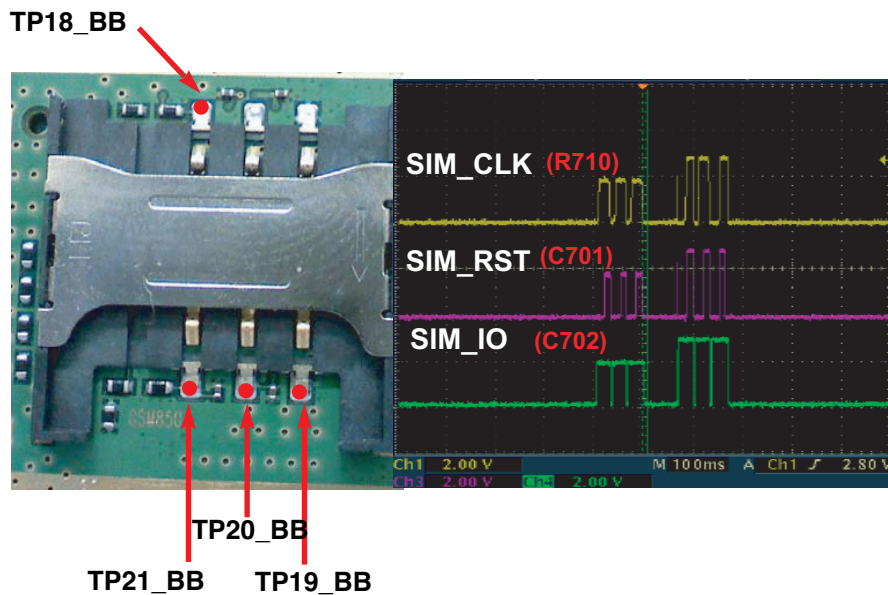
4.8 SIM Detect Trouble Shooting

SIM interface scheme is shown below.

SIM_IO, SIM_CLK, SIM_RST ports are used to communicate DBB with ABB and the Charge Pump in ABB enables 1.8V/3V SIM operation.



<Fig.1> SIM Circuit Diagram



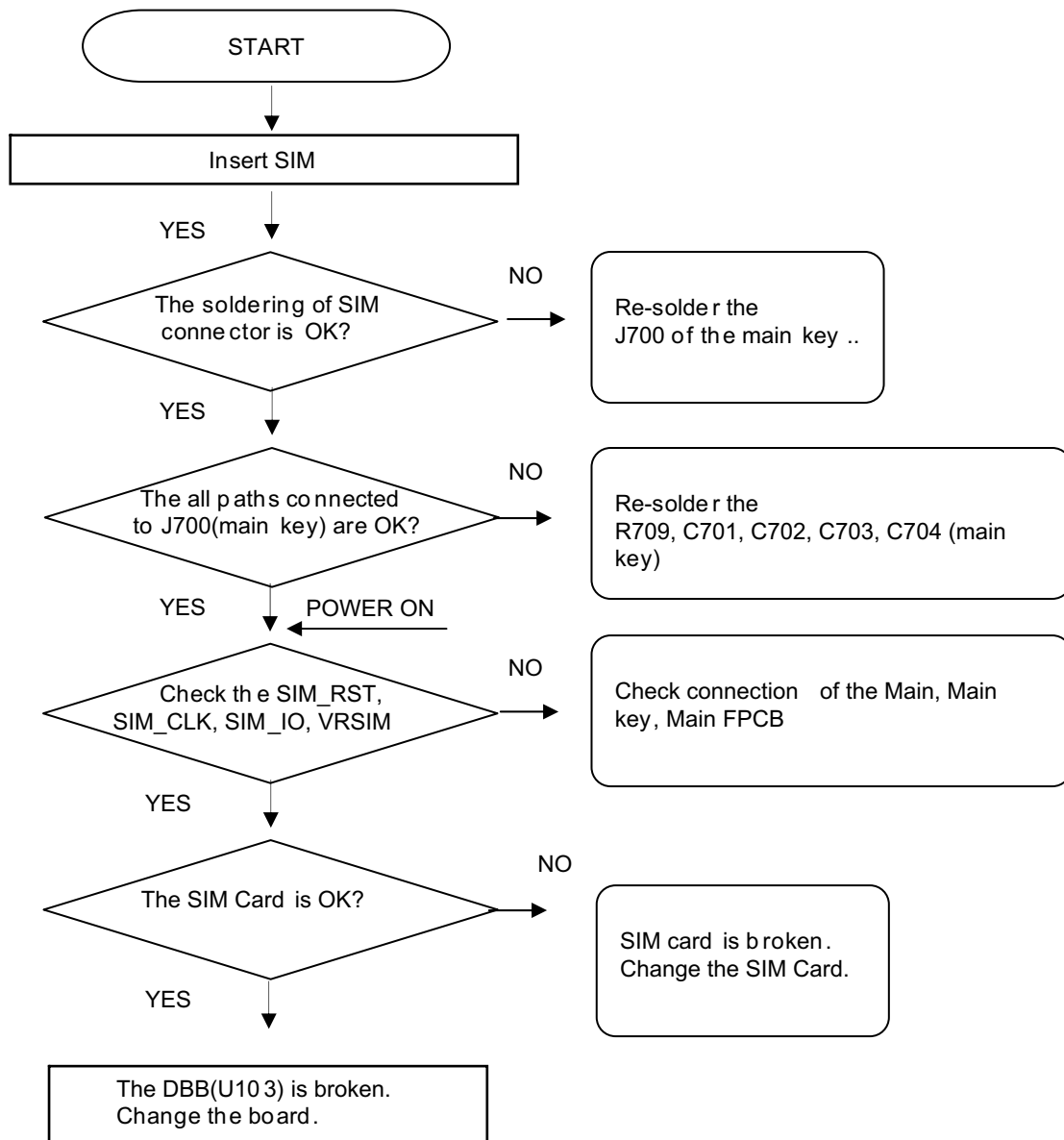
SIM_CLK: SIM Card reference clock
SIM_RST: SIM Card async/sync reset
SIM_IO: SIM Card bi-directional data line

SIM_PWRCTRL: SIM Card power activation
SIM_RnW: SIM Card data line direction
SIM_CD: SIM Card presence detection

4. Trouble Shooting

- Connection between SIM and DBB
 - SIM_CLK, SIM_IO, SIM_RST, SIM_PWRCTRL
- Check Points
 - Contact between SIM and socket
 - Soldering of SIM socket
- Trouble Shooting
 - Insert the SIM into socket
 - Connect PIF_UNION Jig to the phone, and Power on
- Trouble Shooting Procedure
 - Check the power supply
 - Check the soldering of SIM socket
 - Check the SIM

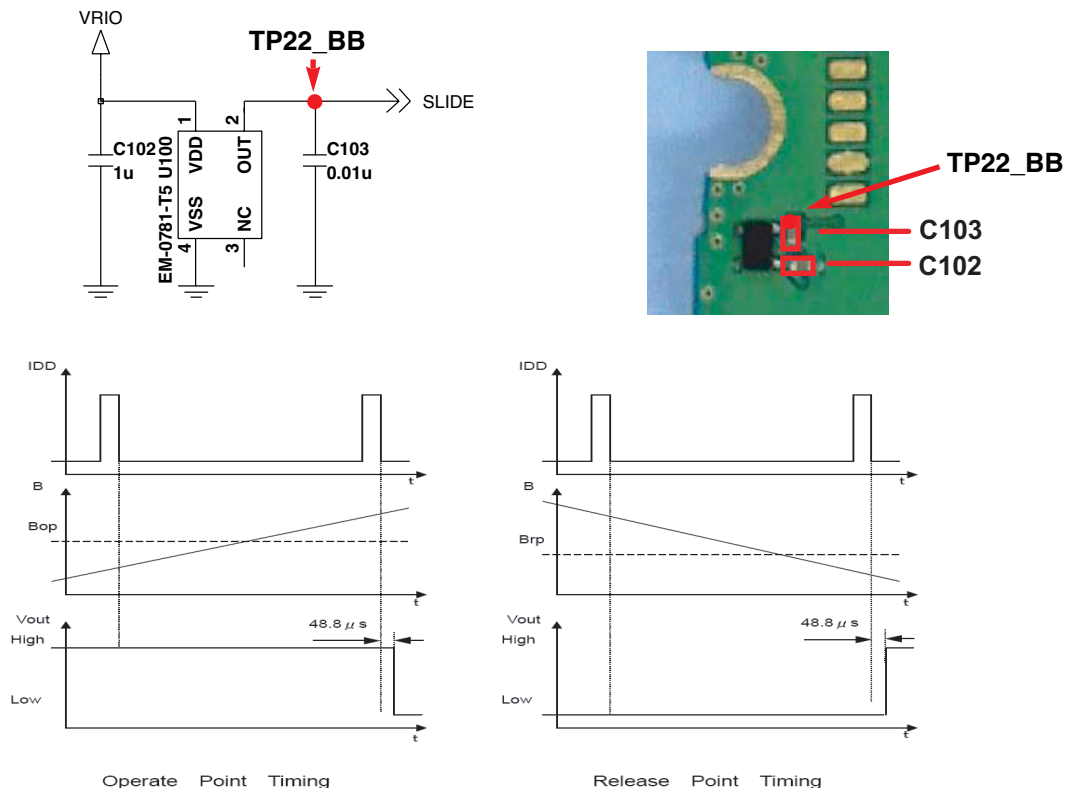
4. Trouble Shooting



4. Trouble Shooting

4.9 Slide Up/Down Trouble Shooting

Slide Operation scheme is shown below.



<Timing Diagram>

4.9.1 Slide Operation(ON/OFF)

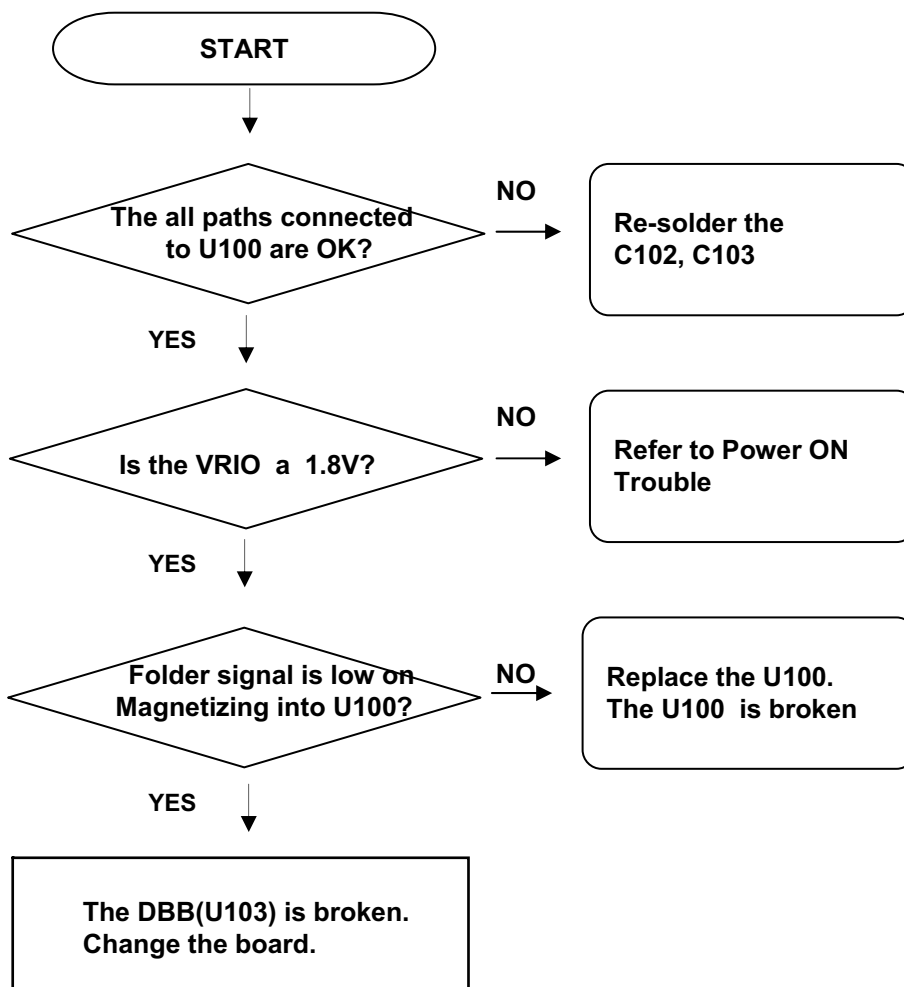
- There is a magnet to detect the slide status, opened or closed.
- If a magnet is down to the hall-effect switch(U100), the voltage at pin 1 of U100 goes to 0V. Otherwise, 1.8V
- This Slide signal is delivered to DBB, and the status of Slide is reported.

Slide Signal Status

L : Down (Magnetized) => Slide Down

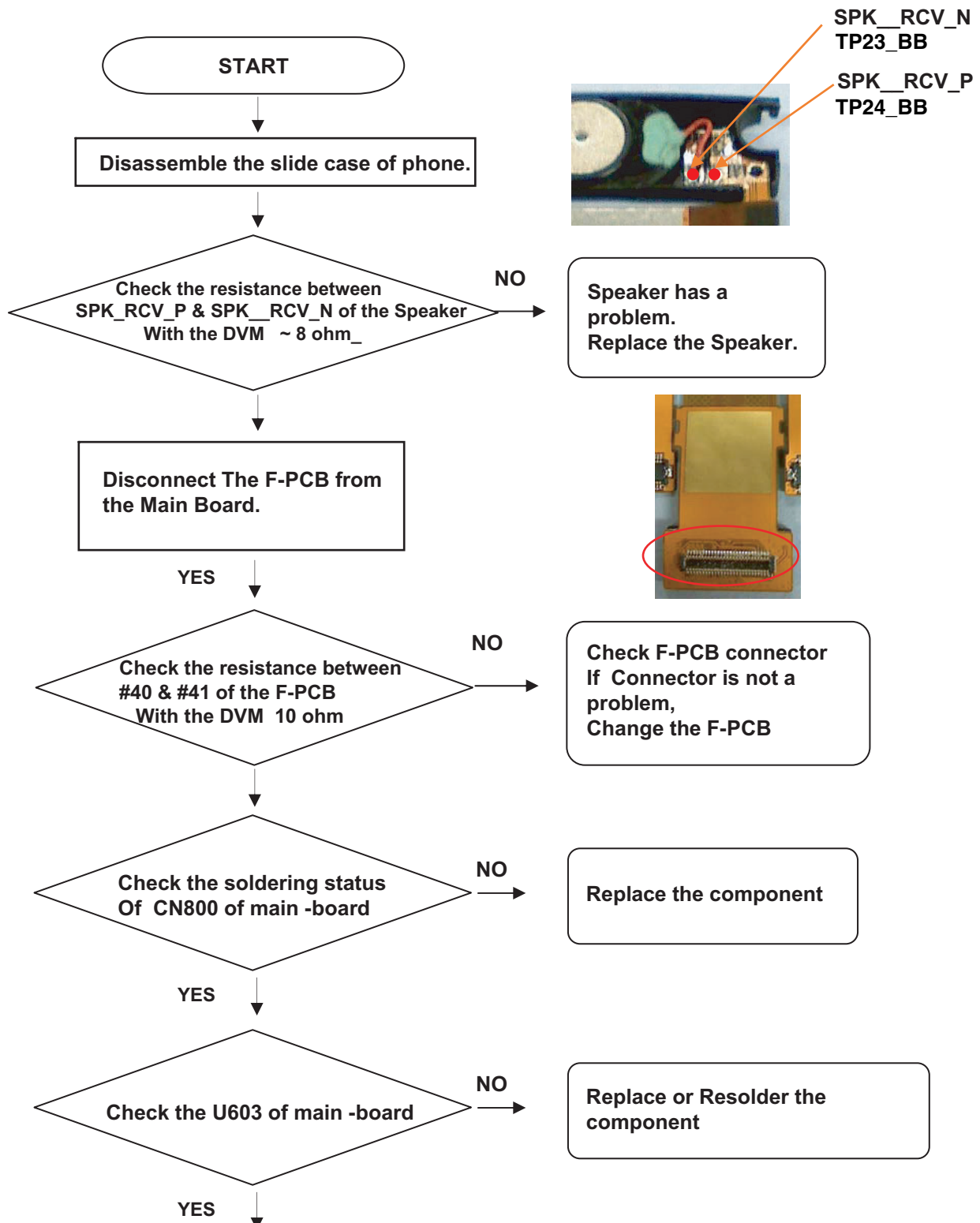
H : Up (Not magnetized) => Slide Up

4.9.2 Slide Trouble (ON/OFF)

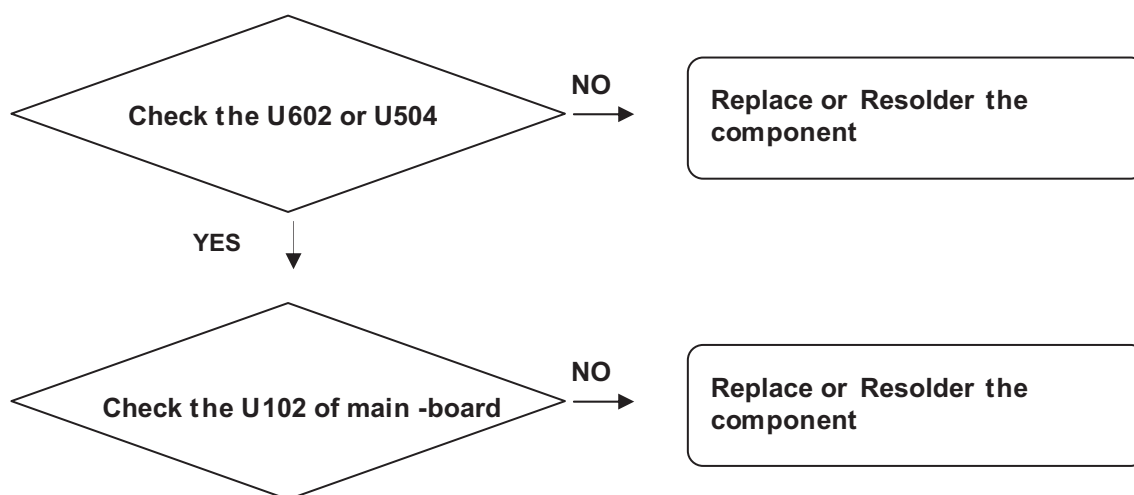


4. Trouble Shooting

4.10 Speaker/Receiver Trouble Shooting (Common Path)



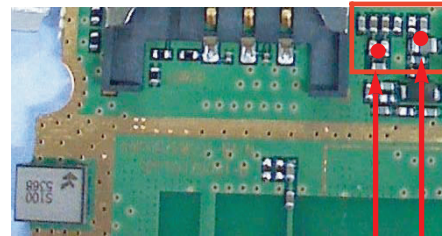
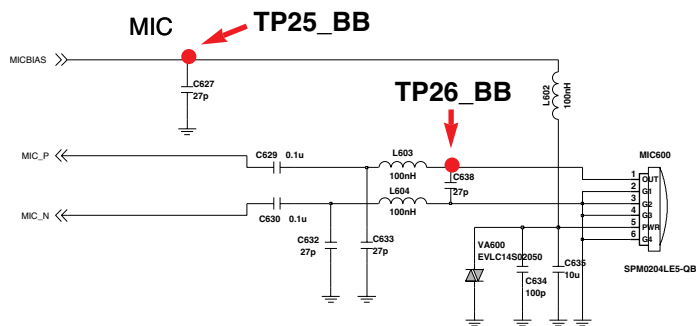
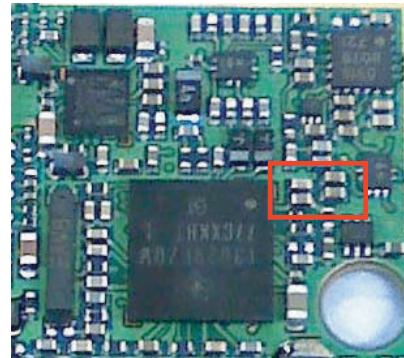
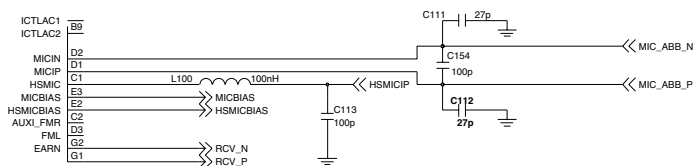
4. Trouble Shooting



4. Trouble Shooting

4.11 MIC Trouble Shooting

- MIC Operation scheme is shown below.

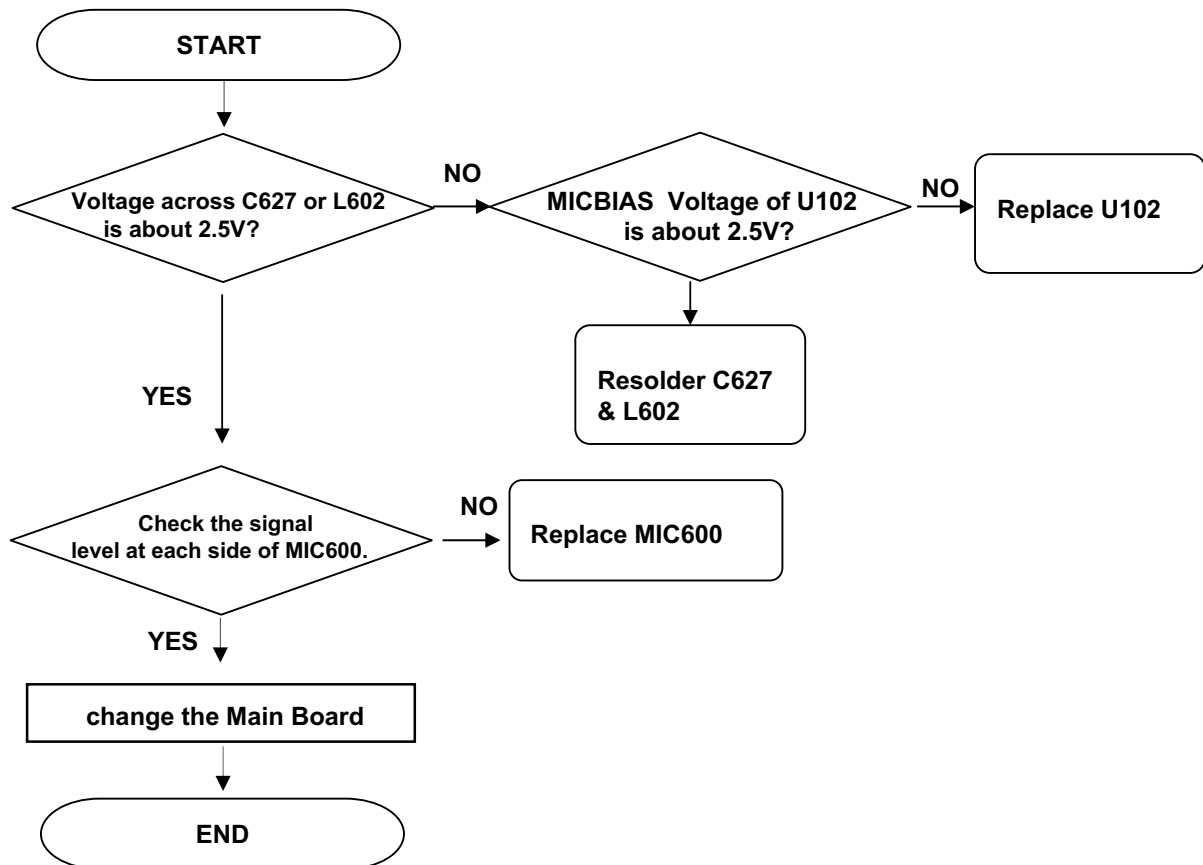


TP26_BB
TP25_BB

- MIC signal flow
 - MIC is enable by MICBIAS
 - MICBIAS Signal from ABB(U102).
 - MICIN, MICIP signal from MIC(MIC600)
- Check Point
 - MIC bias
 - Audio Signal level of the Microphone
 - Soldering of Components

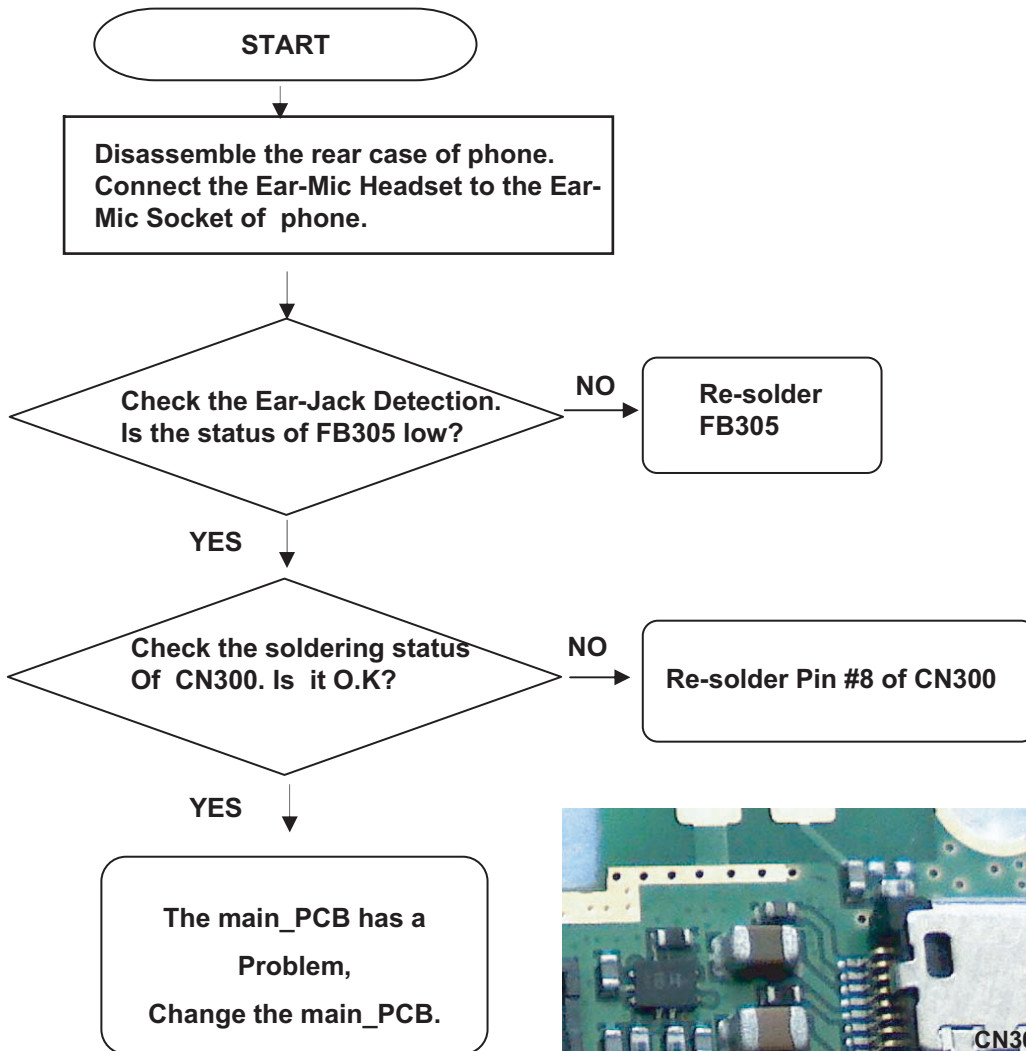
4. Trouble Shooting

- MIC Trouble

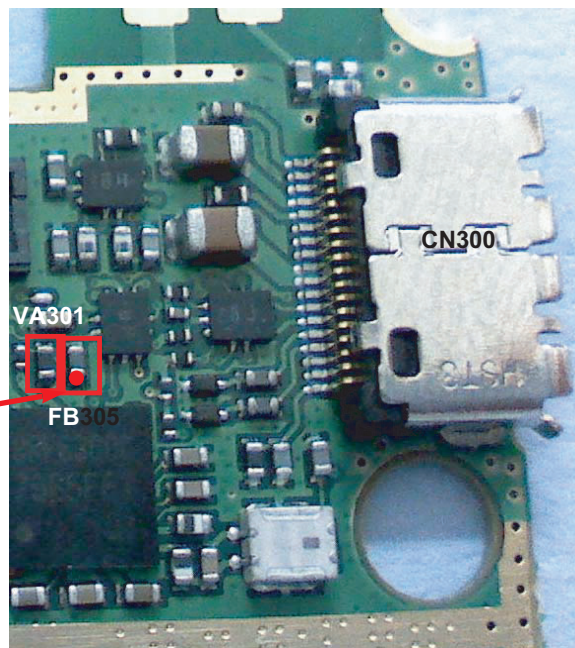


4. Trouble Shooting

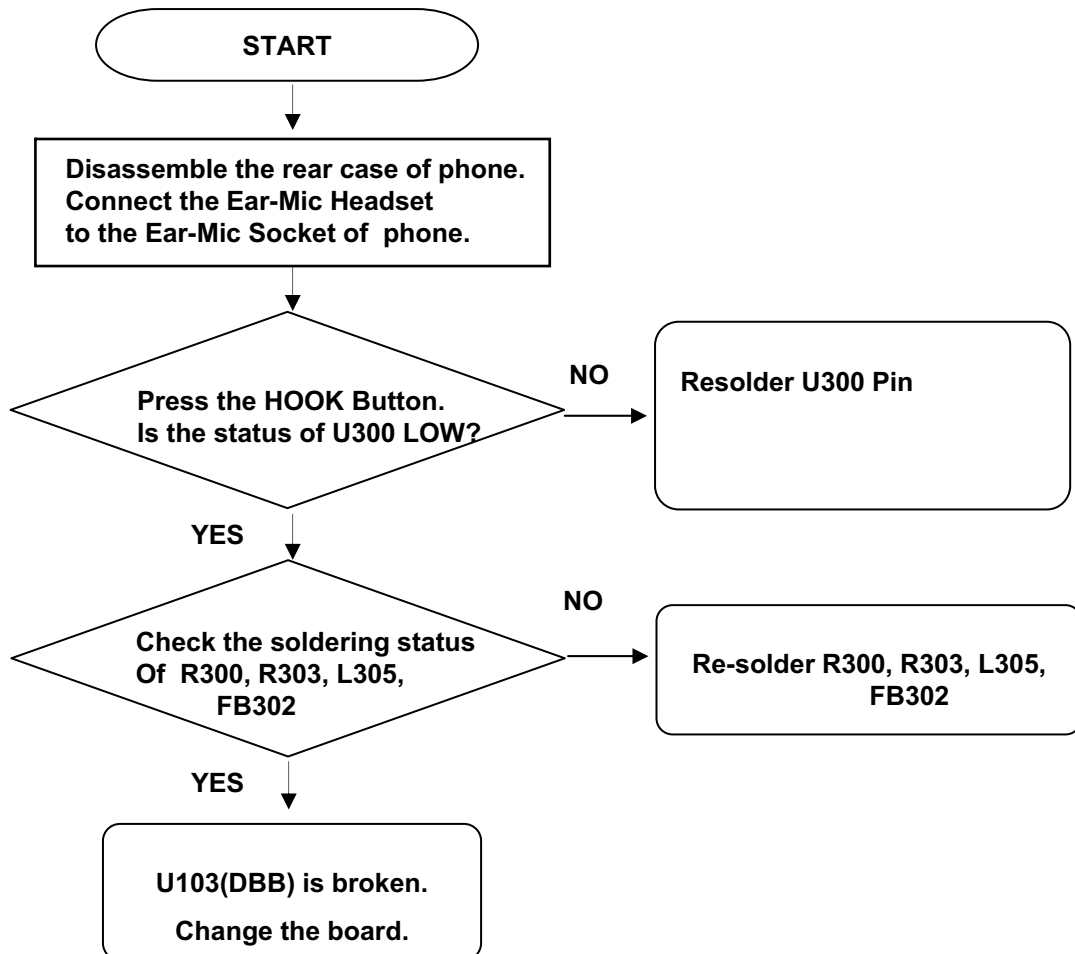
4.12 Ear-Mic Jack Detection Trouble Shooting



TP27_BB

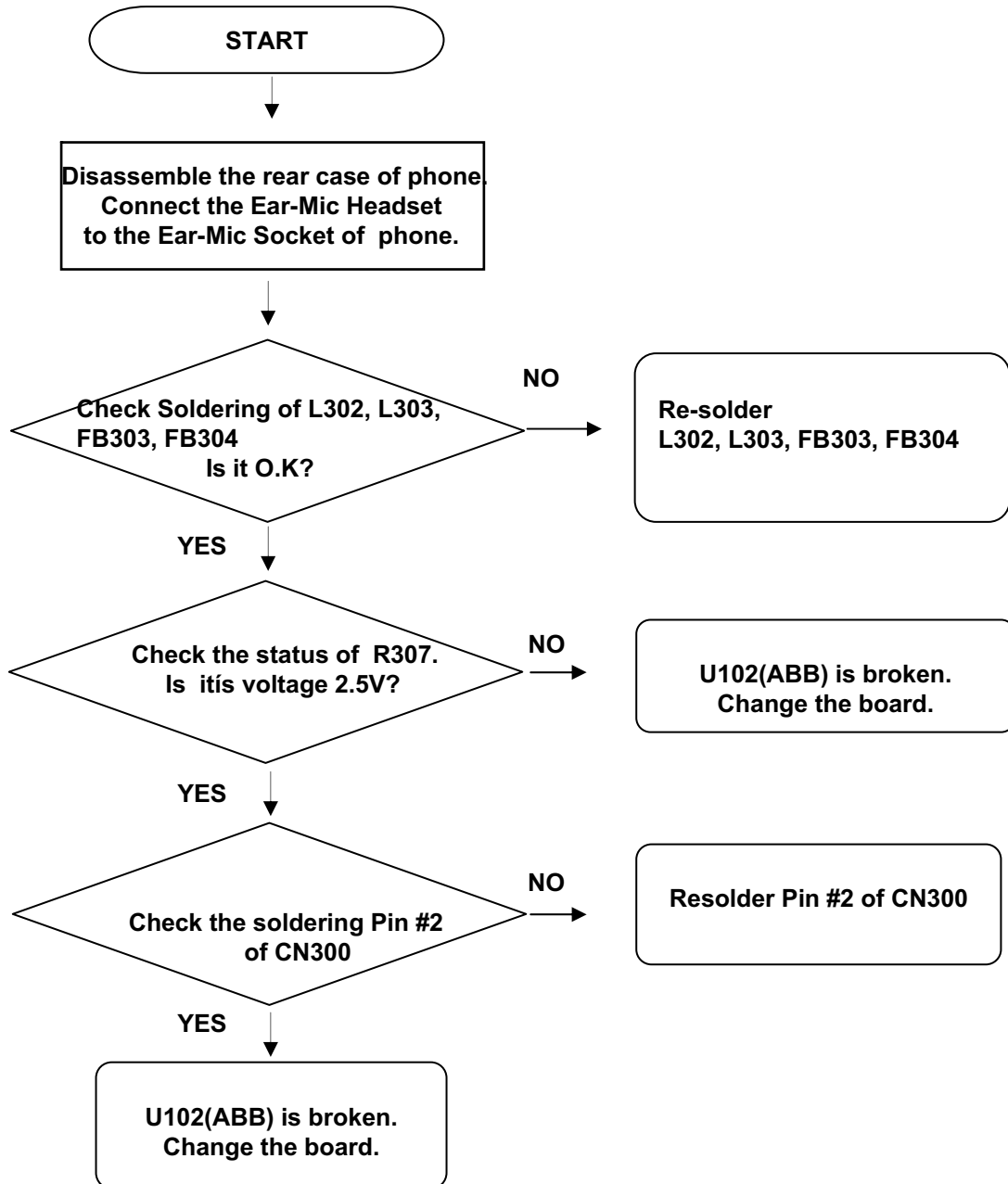


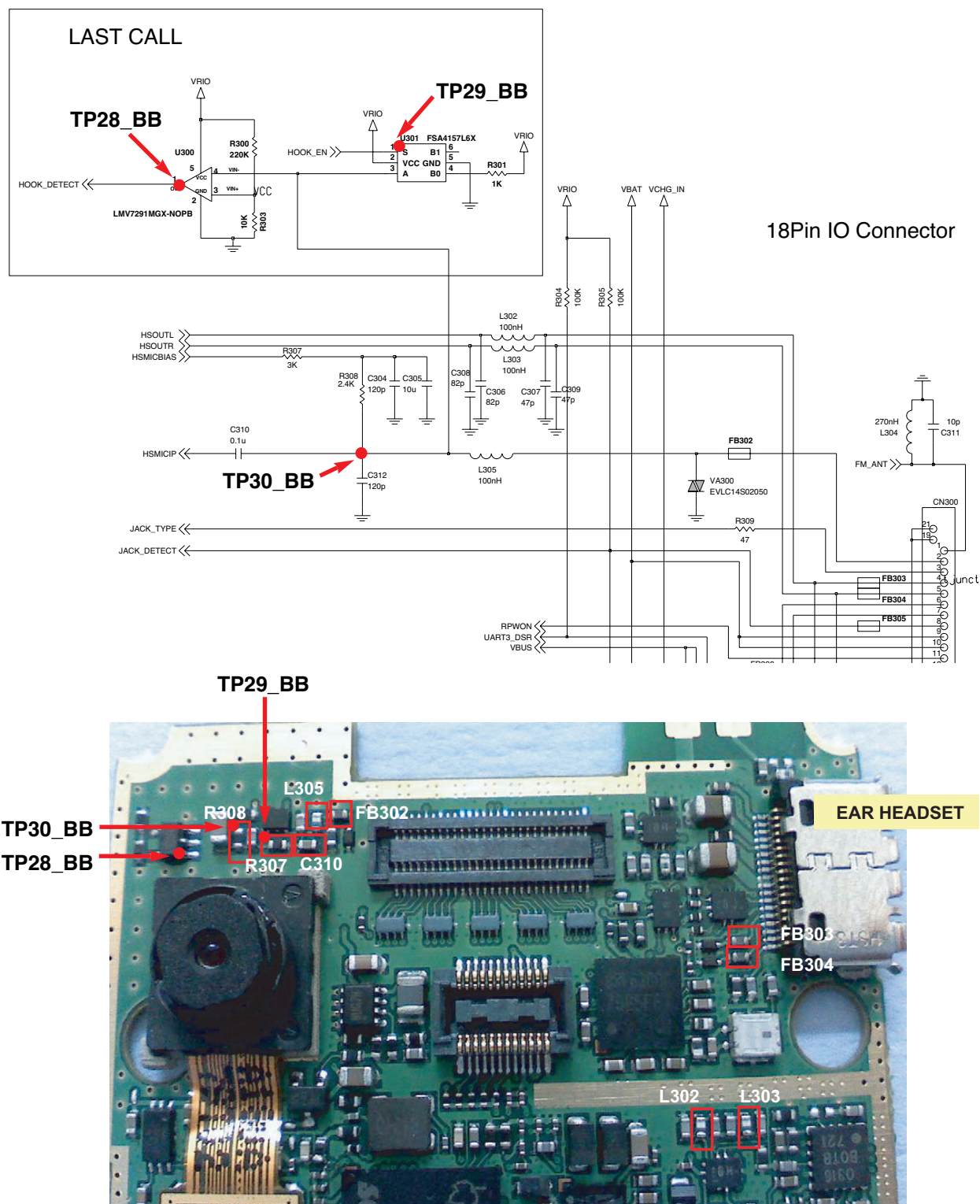
4.13 Ear-Mic Hook Detection Trouble Shooting



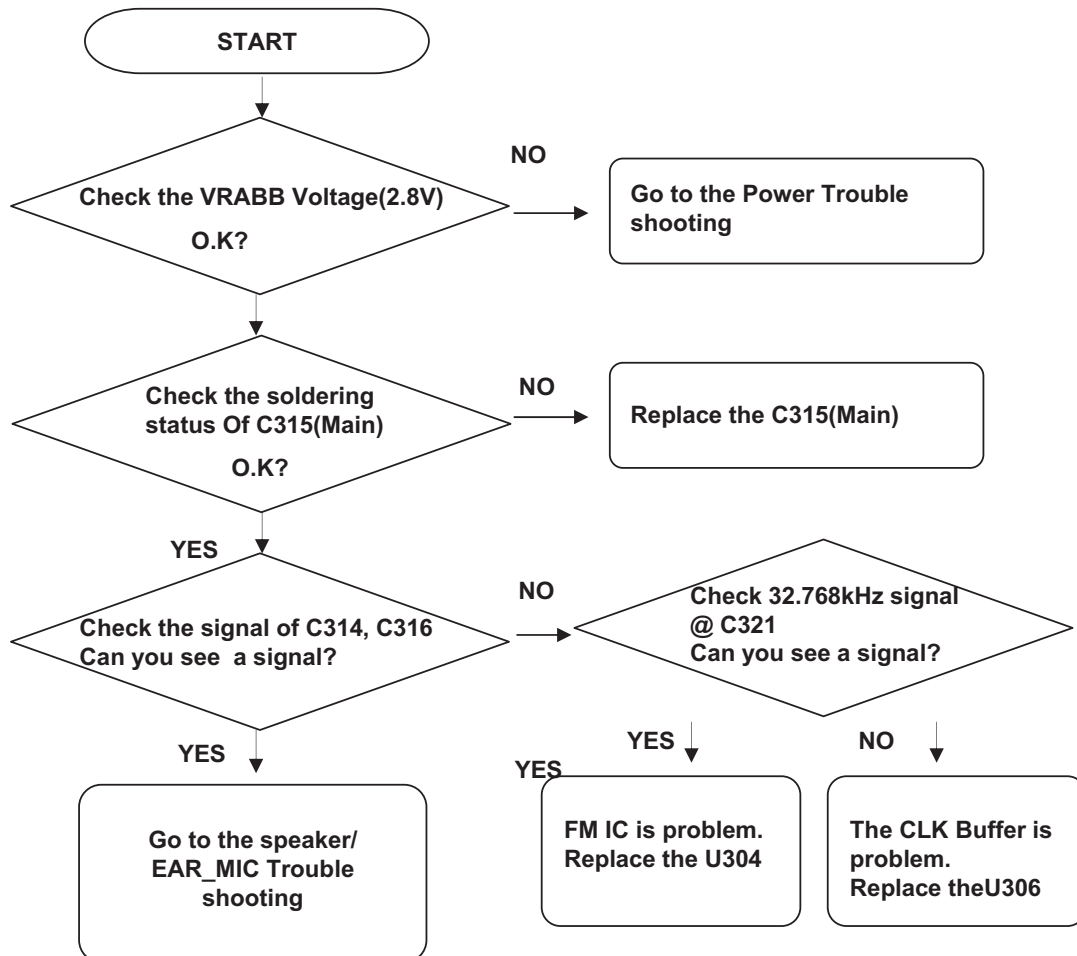
4. Trouble Shooting

4.14 Ear-Mic Headset MIC Trouble Shooting

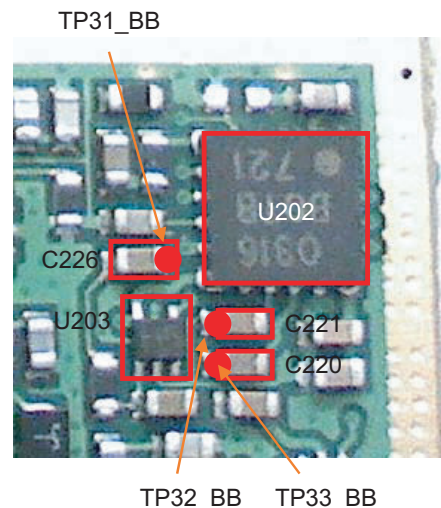
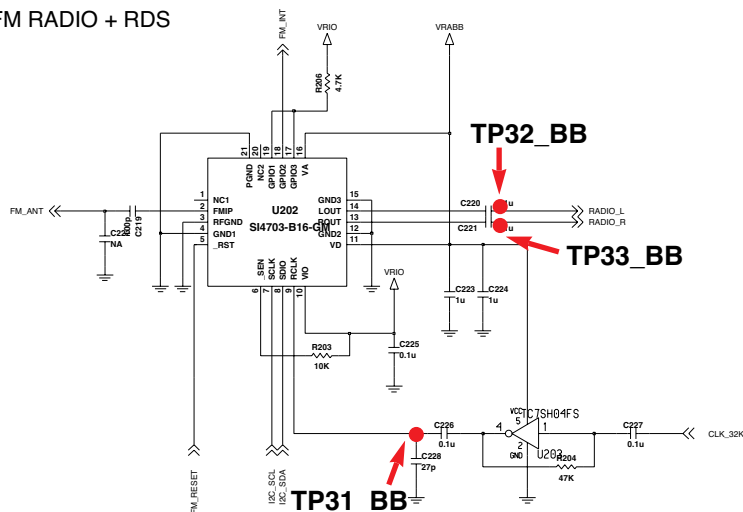




4.16 FM-Radio Trouble Shooting

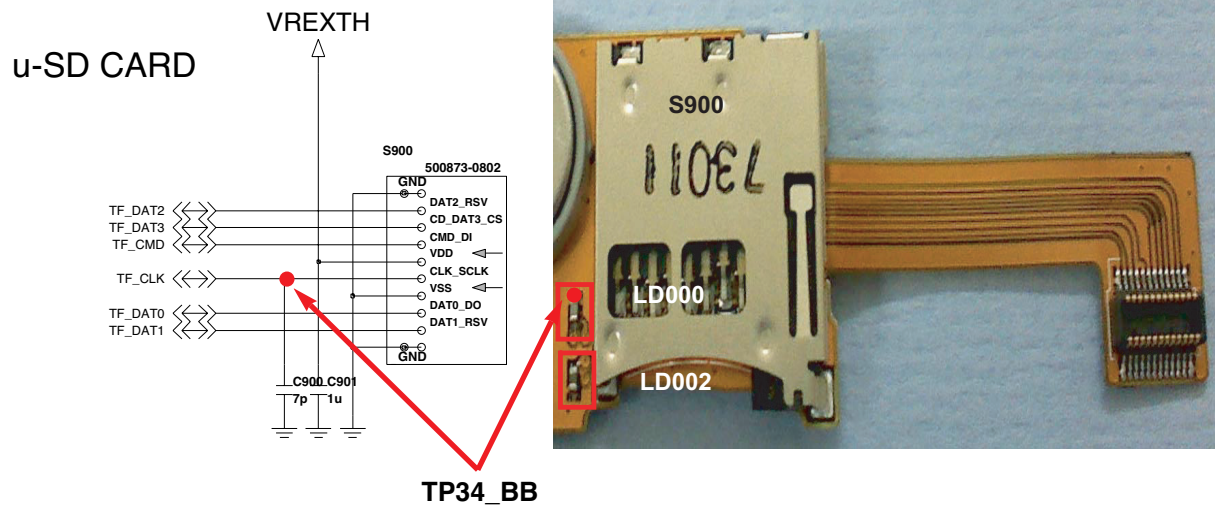


FM RADIO + RDS

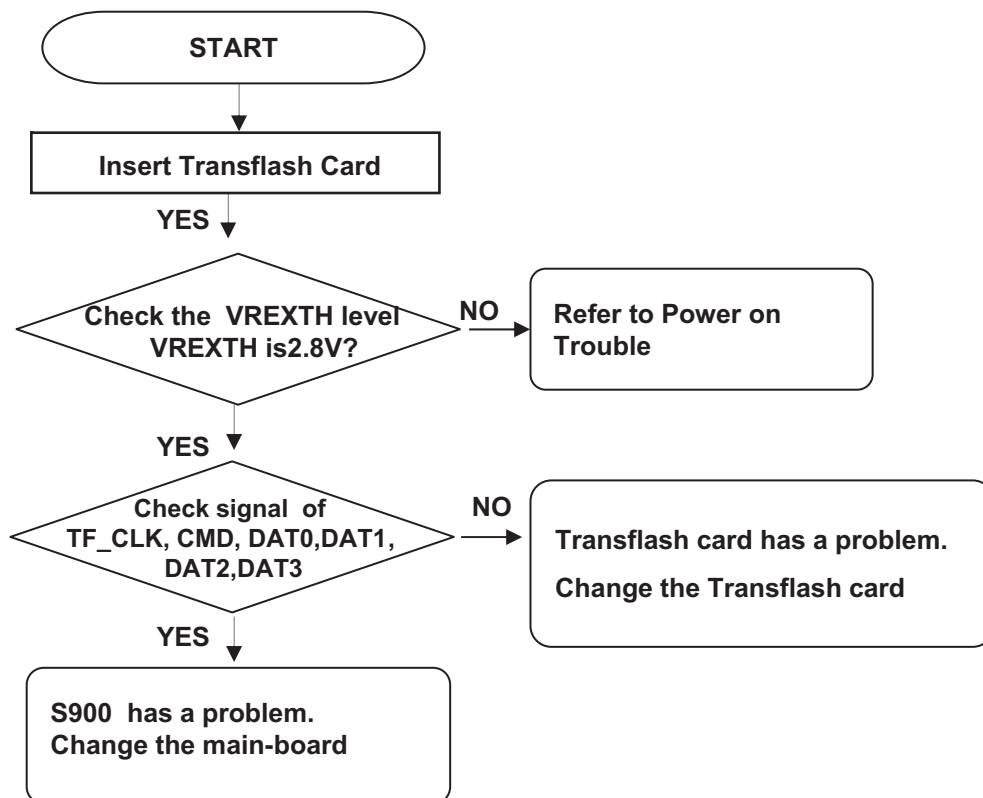


4.17 Transflash Trouble Shooting

- Transflash Operation scheme is shown below.

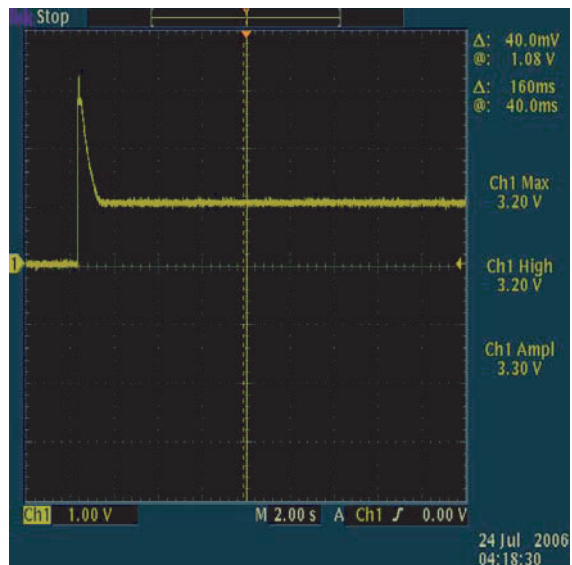
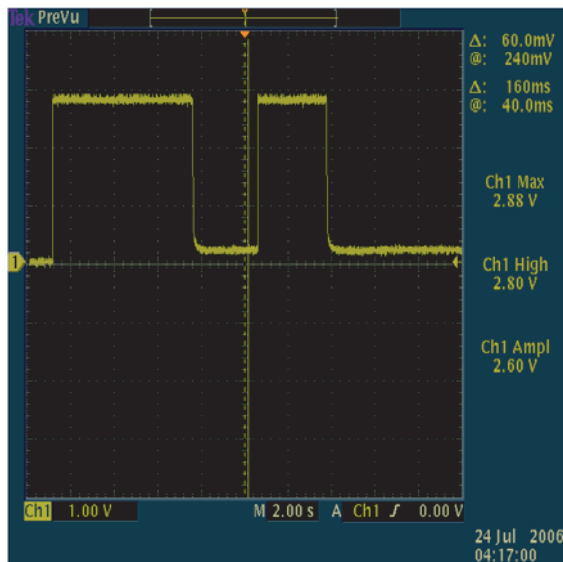


- Transflash Trouble



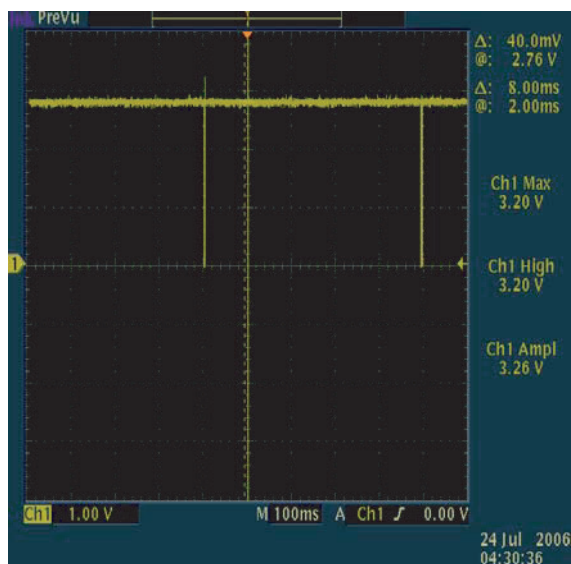
4. Trouble Shooting

- VRMMC Signal(Power ON)



<VRMMC Signal when T-Flash is inserted>

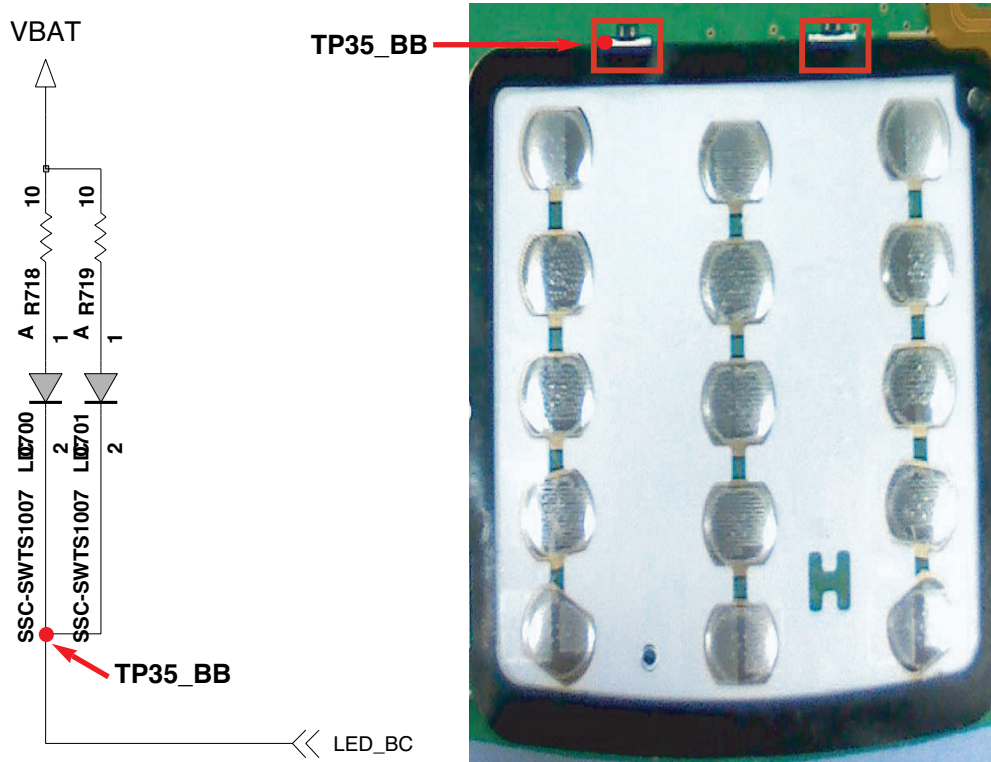
- TF_DAT0 Signal (Music Play)



<TF_DAT0 Signal while T-Flash is read>

4.18 Main Key Backlight LED Trouble Shooting

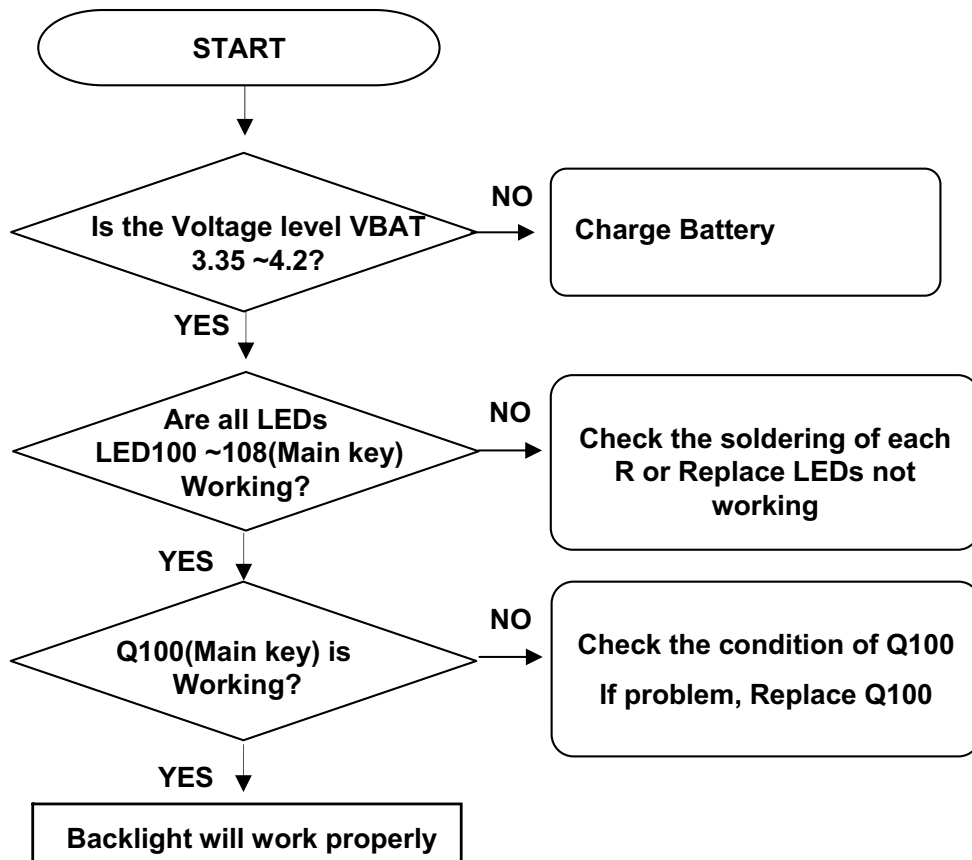
- Keypad backlight LED Operation scheme is shown below.



- Backlight operation
 - Keypad backlight LED is controlled with LED_BC signal
 - LED_BC signal from ABB(U102)
 - The LEDs are forward biased and turned on
- Check Point
 - VBAT level (3.35 ~4.2V)
 - LEDs
 - Main key, Main, Main FPCB connection)

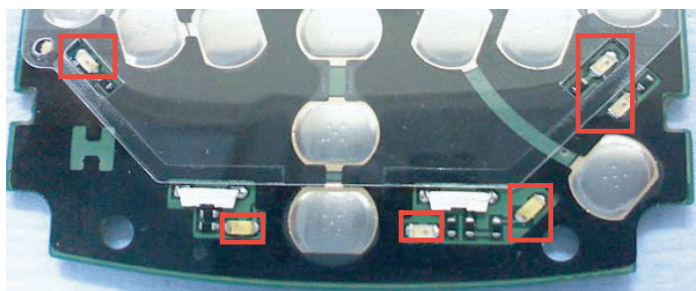
4. Trouble Shooting

- MAIN KEY Backlight LED Trouble

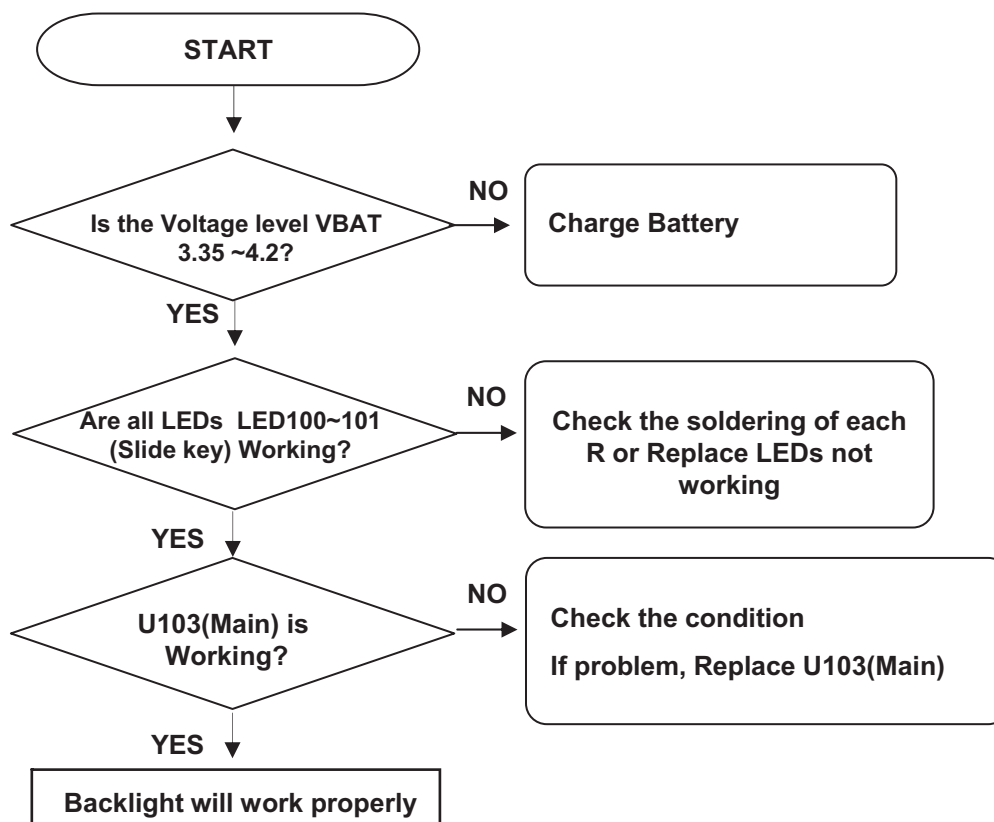


4.19 Slide Key Backlight LED Trouble Shooting

- Slide backlight LED Operation scheme is shown below.



- Slide Backlight operation
 - Slide backlight LED is controlled with LED_ABC signal
 - LED_ABC signal from ABB(U102)
 - The LEDs are forward biased and turned on
- Check Point
 - VBAT level (3.35 ~4.2V)
 - LEDs

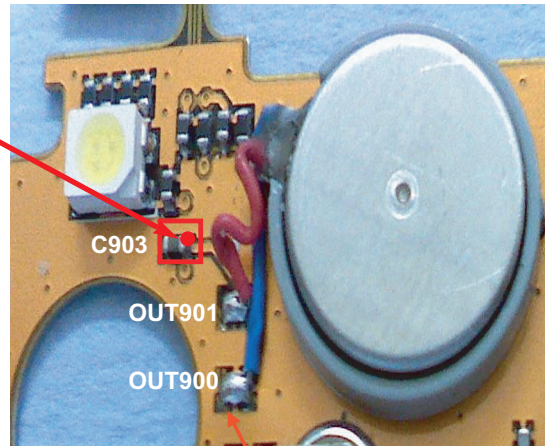
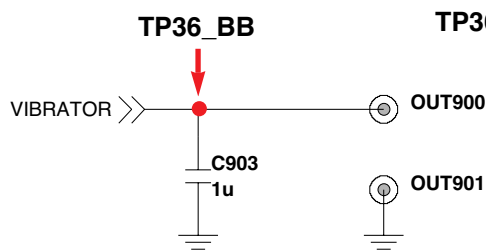


4. Trouble Shooting

4.20 Vibrator Trouble Shooting

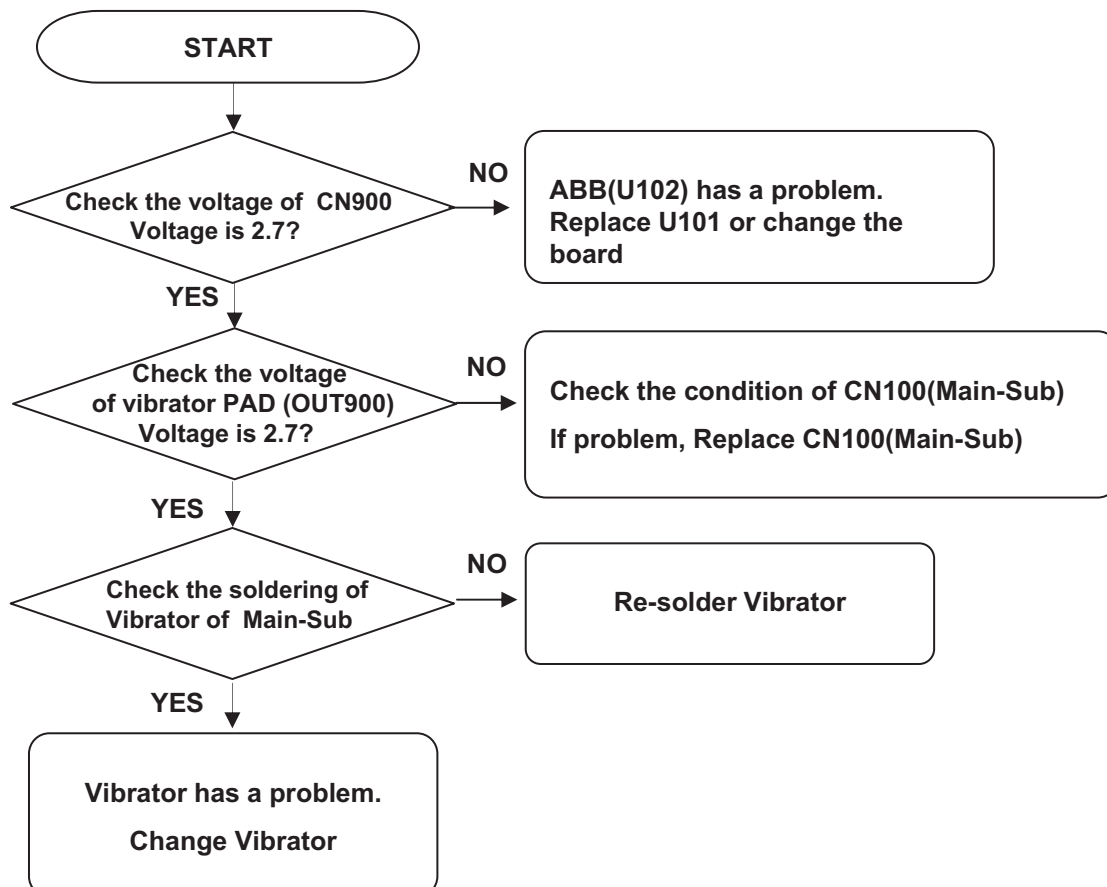
- Vibrator operation scheme is shown below

VIBRATOR



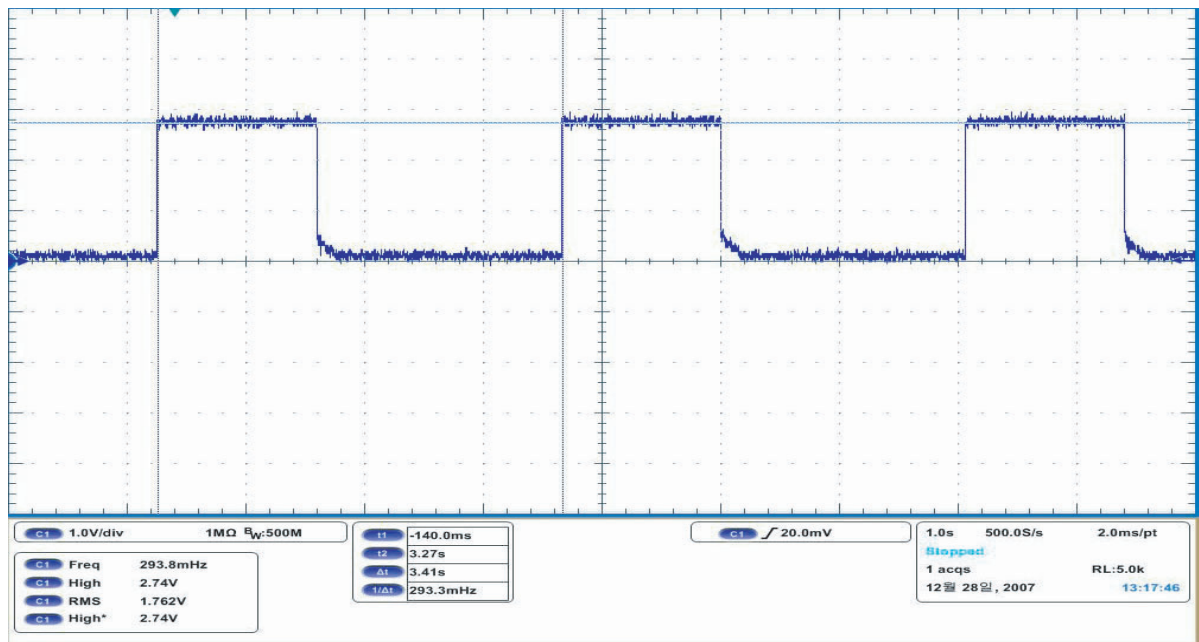
Soldering check

- Vibrator Trouble



4. Trouble Shooting

- Vibrator Diagram in the engineering Mode (Alert > vibrator)



5. Download

5. Download

5.1 Download Software

5.1.1 The purpose of downloading software

5.1.1.1 To make a phone operate at the first manufacturing

- A phone = Hardware + Software
- A phone cannot operate with hardware alone.
- The hardware with the suitable software can operate properly.

5.1.2 To upgrade the software of the phone

- The software of the phone may be changed to enhance the performance of the phone.
- The older version software of the phone can be replaced to the newer version.

5.2 The Environment of Downloading Software.

5.2.1 In case of using the USB Data Kit



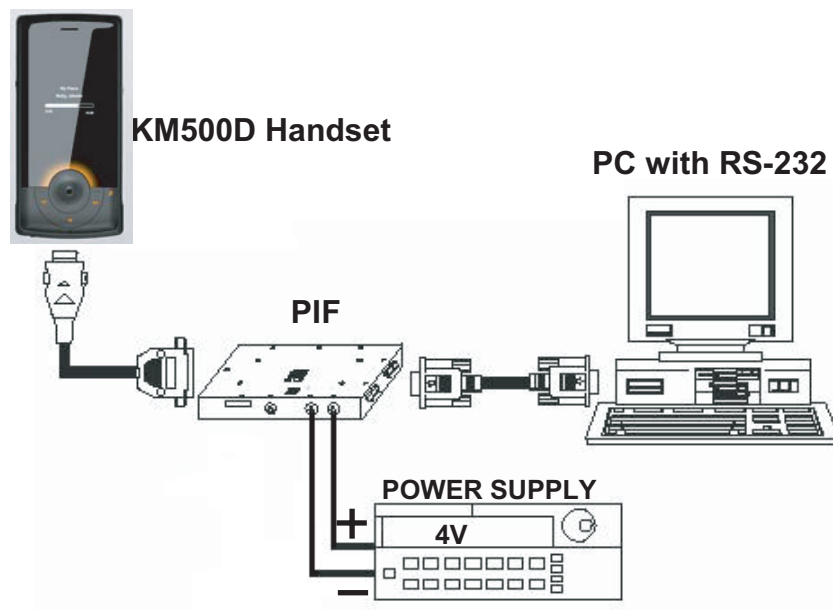
5.2.1.1 The Preparation

- Target Handset (KM500D)
- USB Data kit
- Battery

5.2.1.2 IBM compatible PC supporting USB with Windows 98 or newer

If you use data kit, you should have a battery with the voltage above 3.7V.

5.2.2 In case of using the PIF(MON Port)



5.2.2.1 Preparation

- Target Handset (KM500D)
- PIF
- RS-232 Cable and PIF-to-Phone interface Cable
- Power Supply or Battery

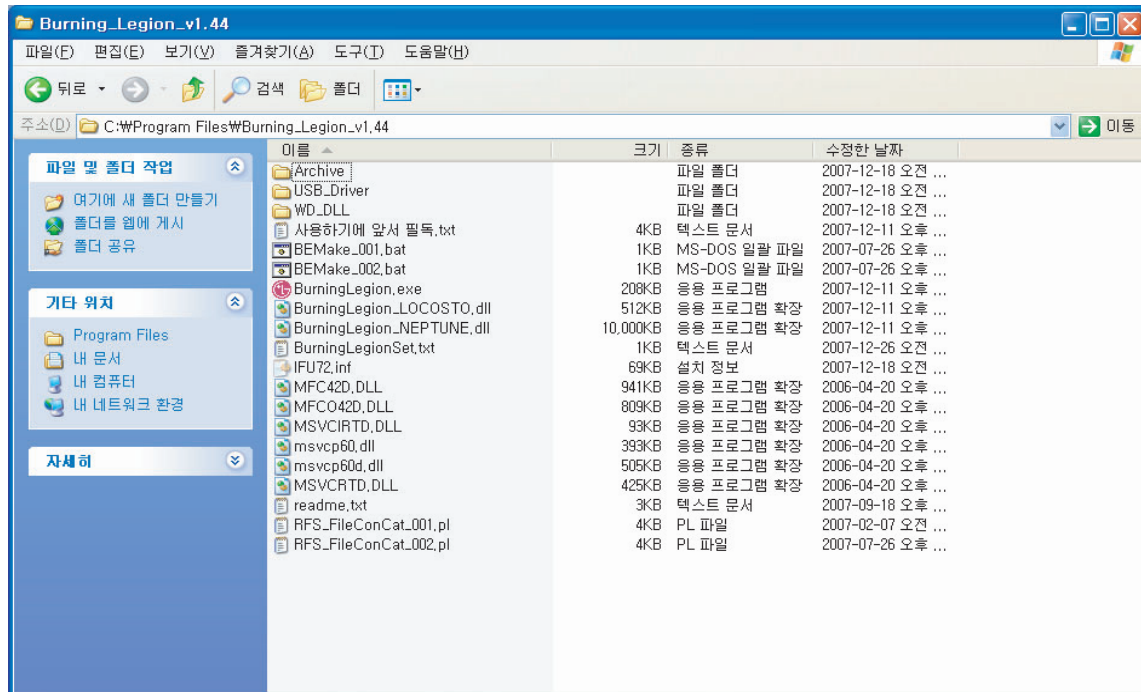
5.2.2.2 IBM compatible PC supporting RS-232 with Windows 98 or newer

If you use battery, you should have a battery with the voltage above 3.7V.

5. Download

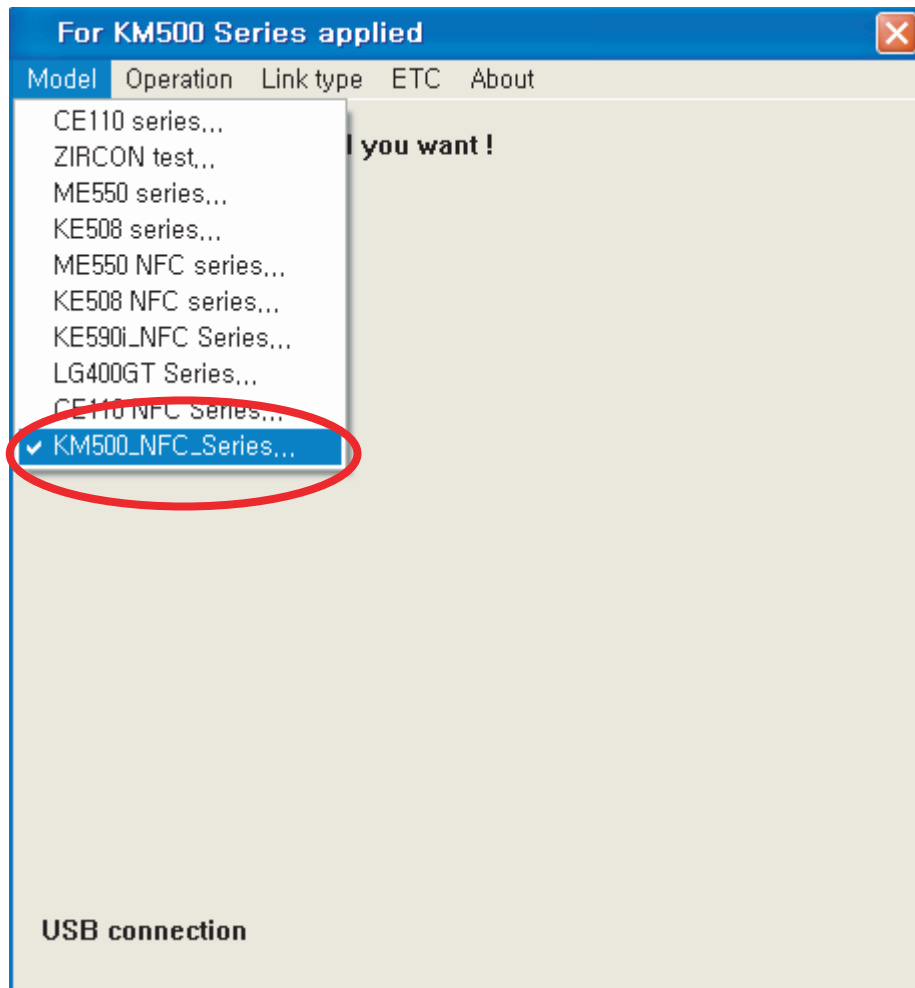
5.3 Download Procedure

5.3.1 Computer Program file -> BurningLegion.EXE Click



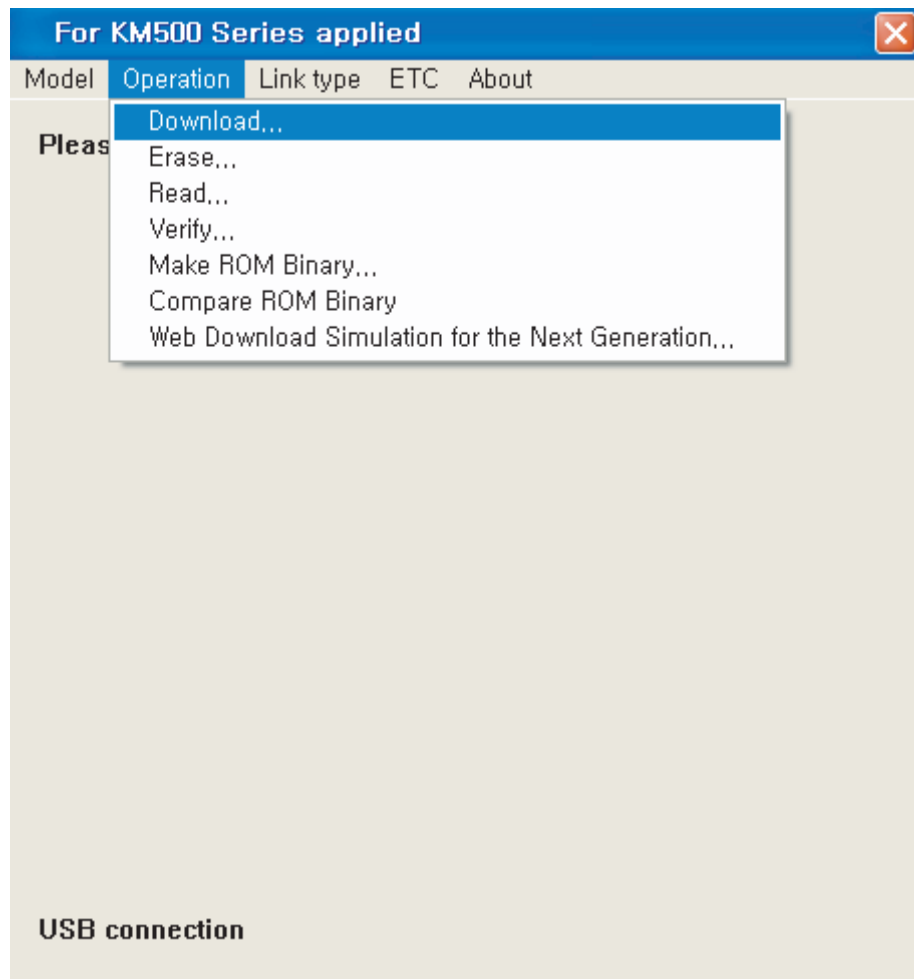
5.3.2 Click the “Model” button.

Then, choose KM500_NFC_Series... which is going to download.

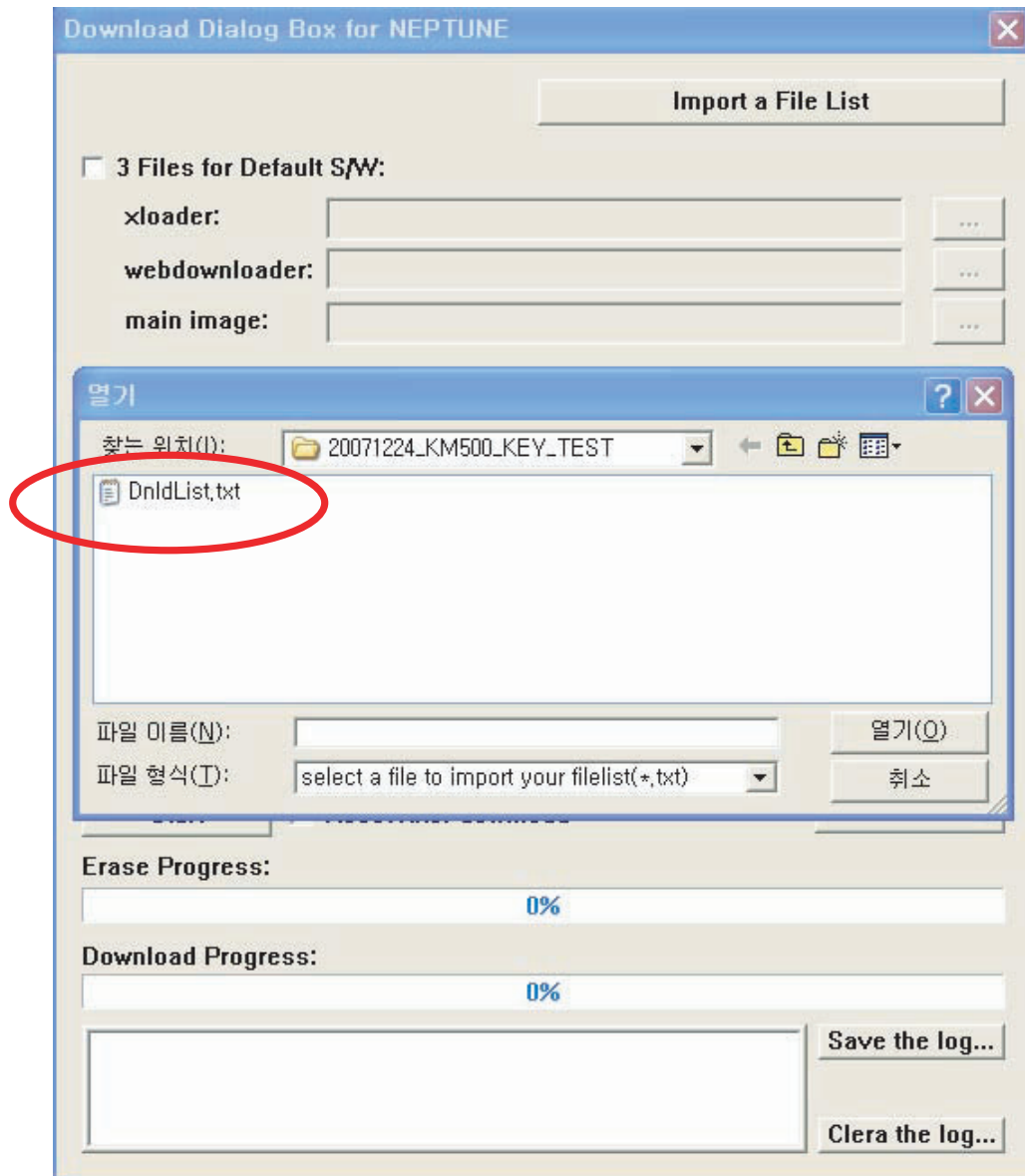


5. Download

5.3.3 Click Download... In Operation Menu

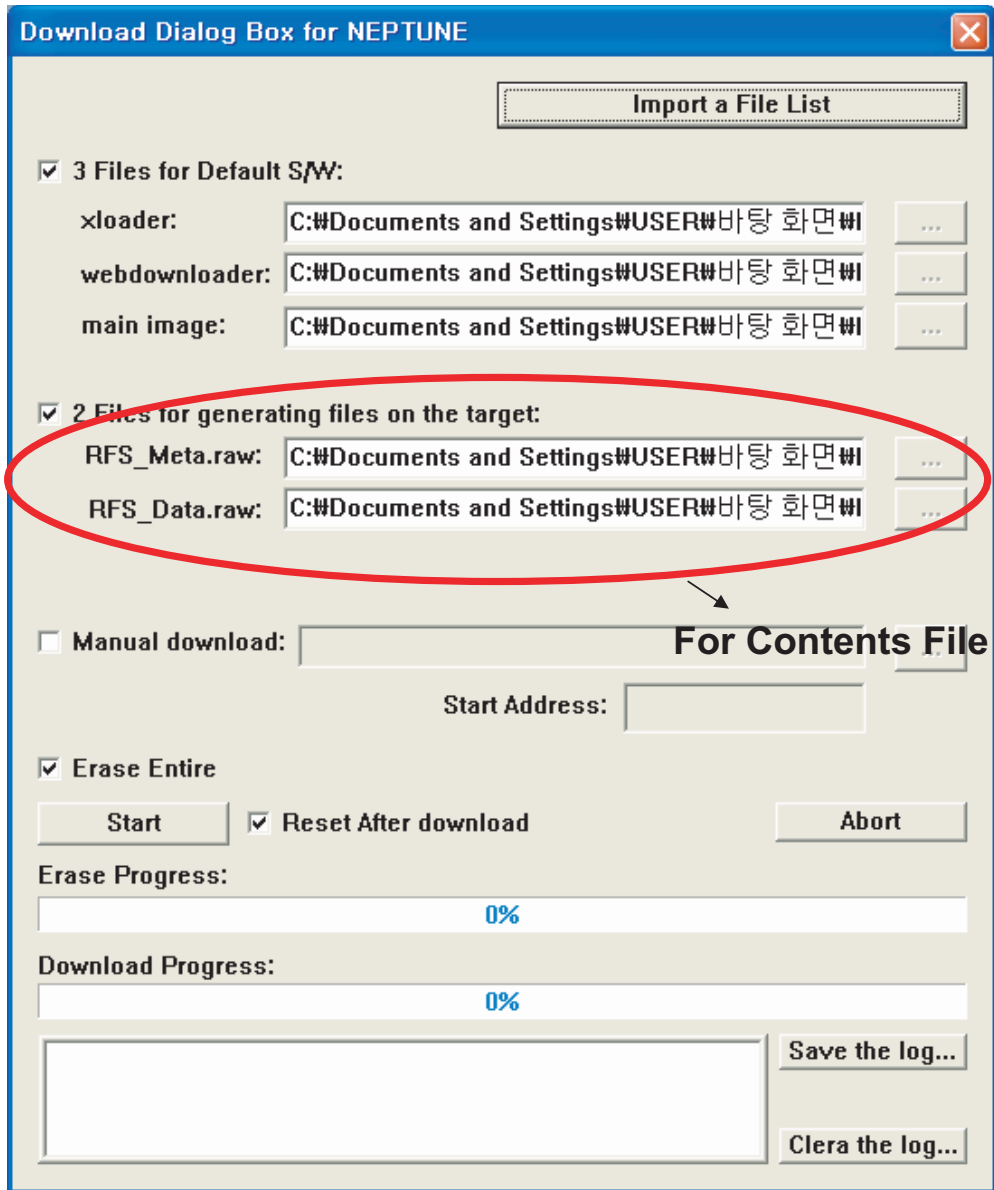


5.3.4 After Clicking “the Import a file list”, choose download file

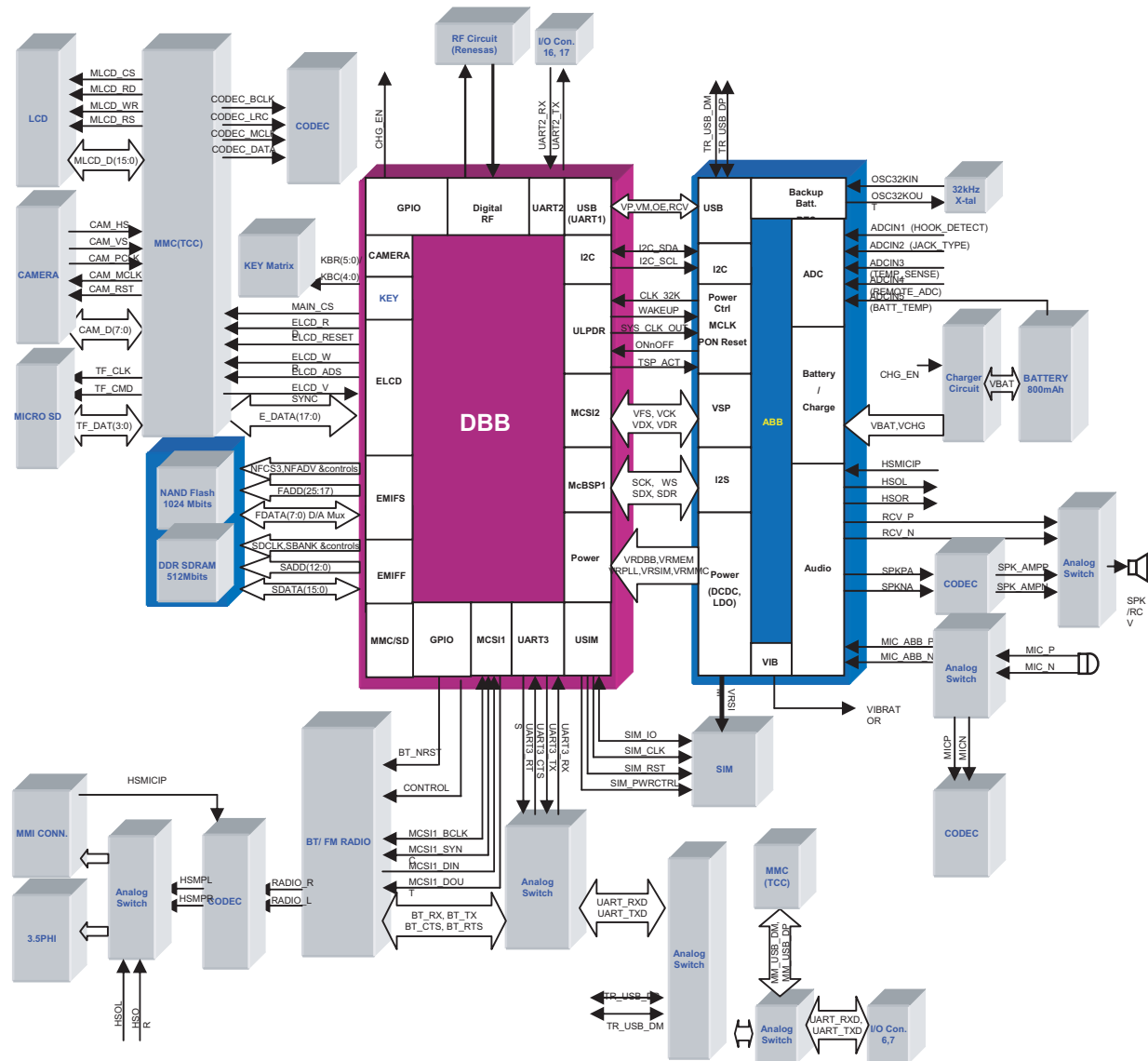


5. Download

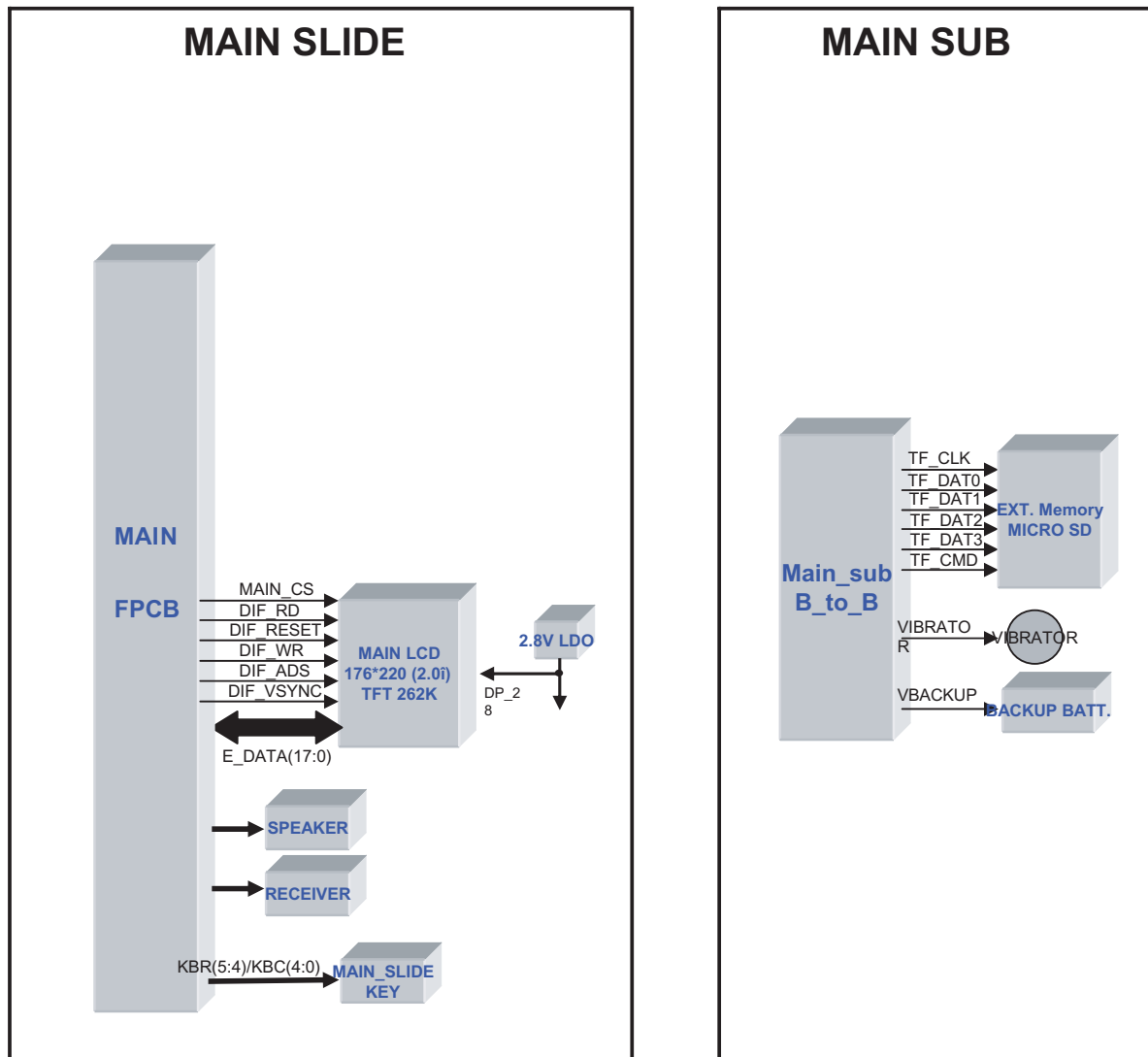
5.3.5 start download



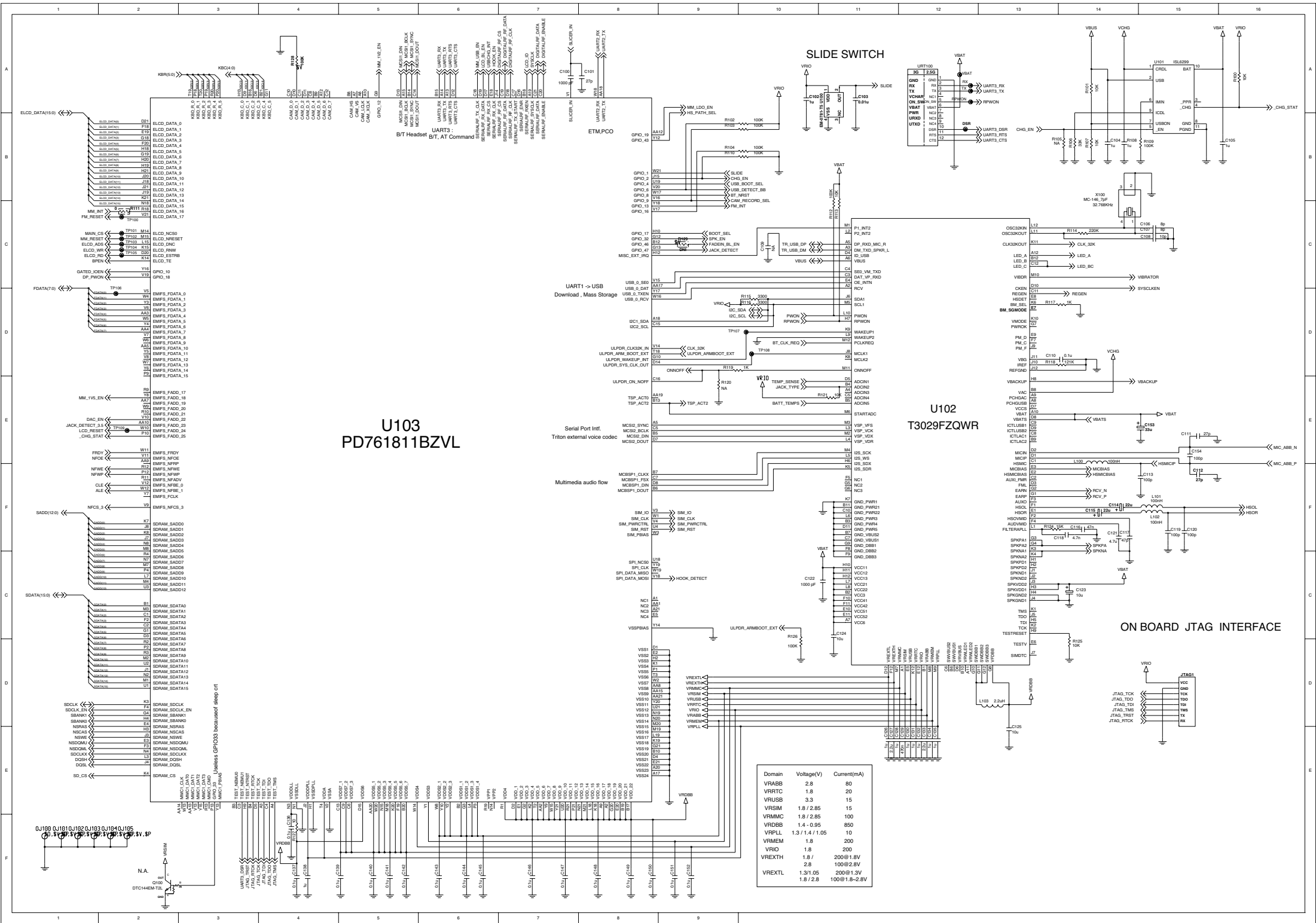
6. Block Diagram



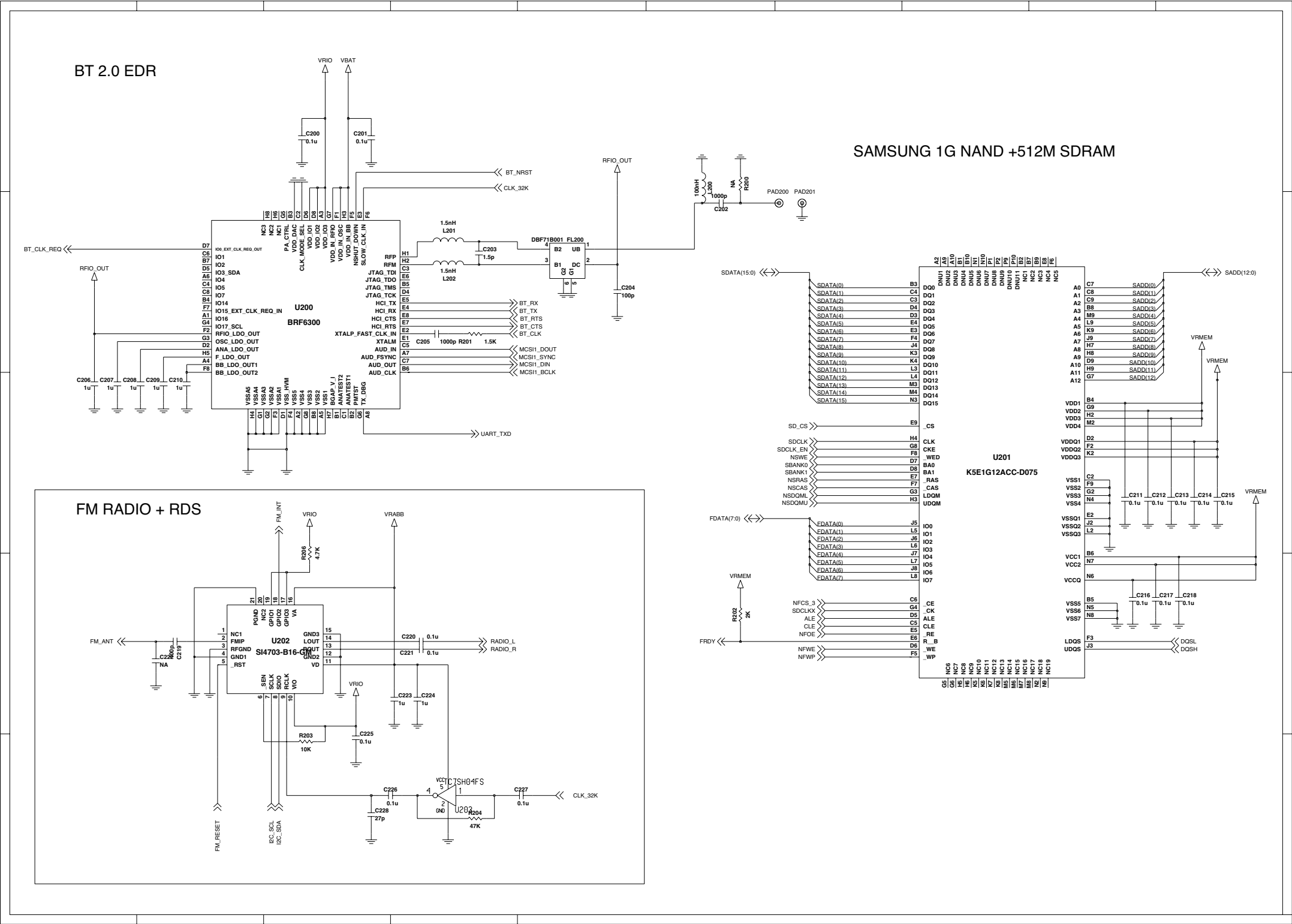
6. Block Diagram



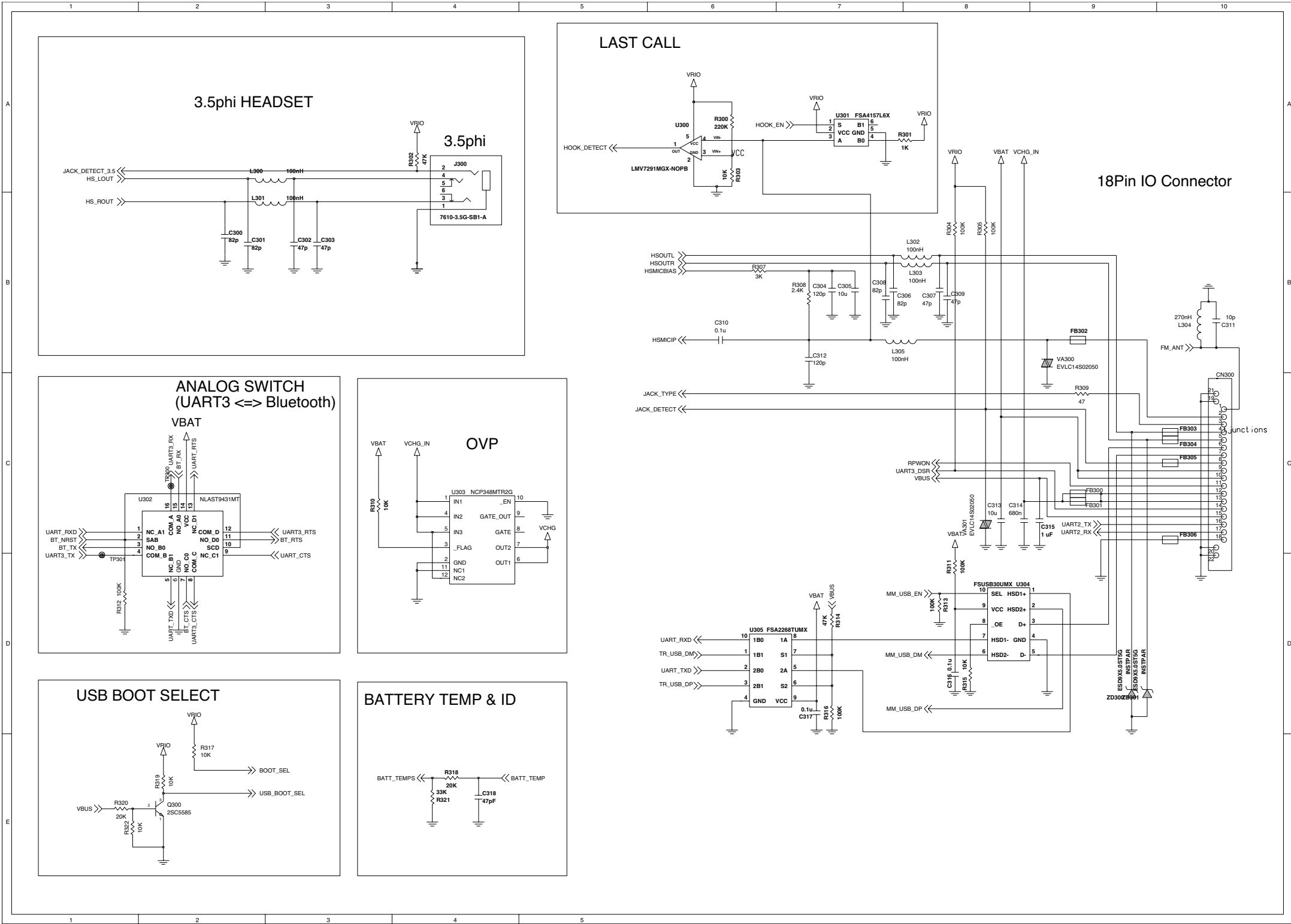
7. CIRCUIT DIAGRAM



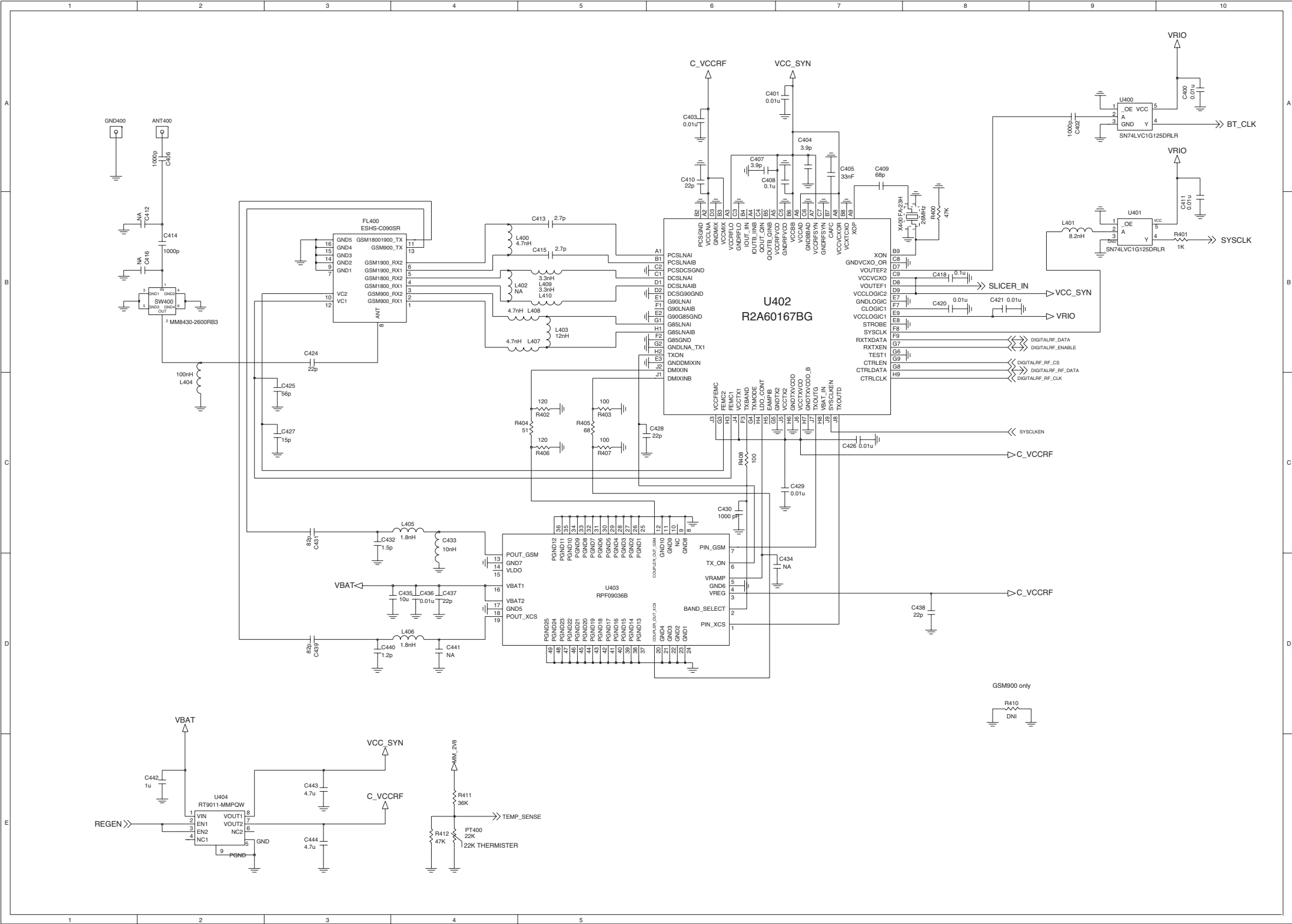
7. CIRCUIT DIAGRAM



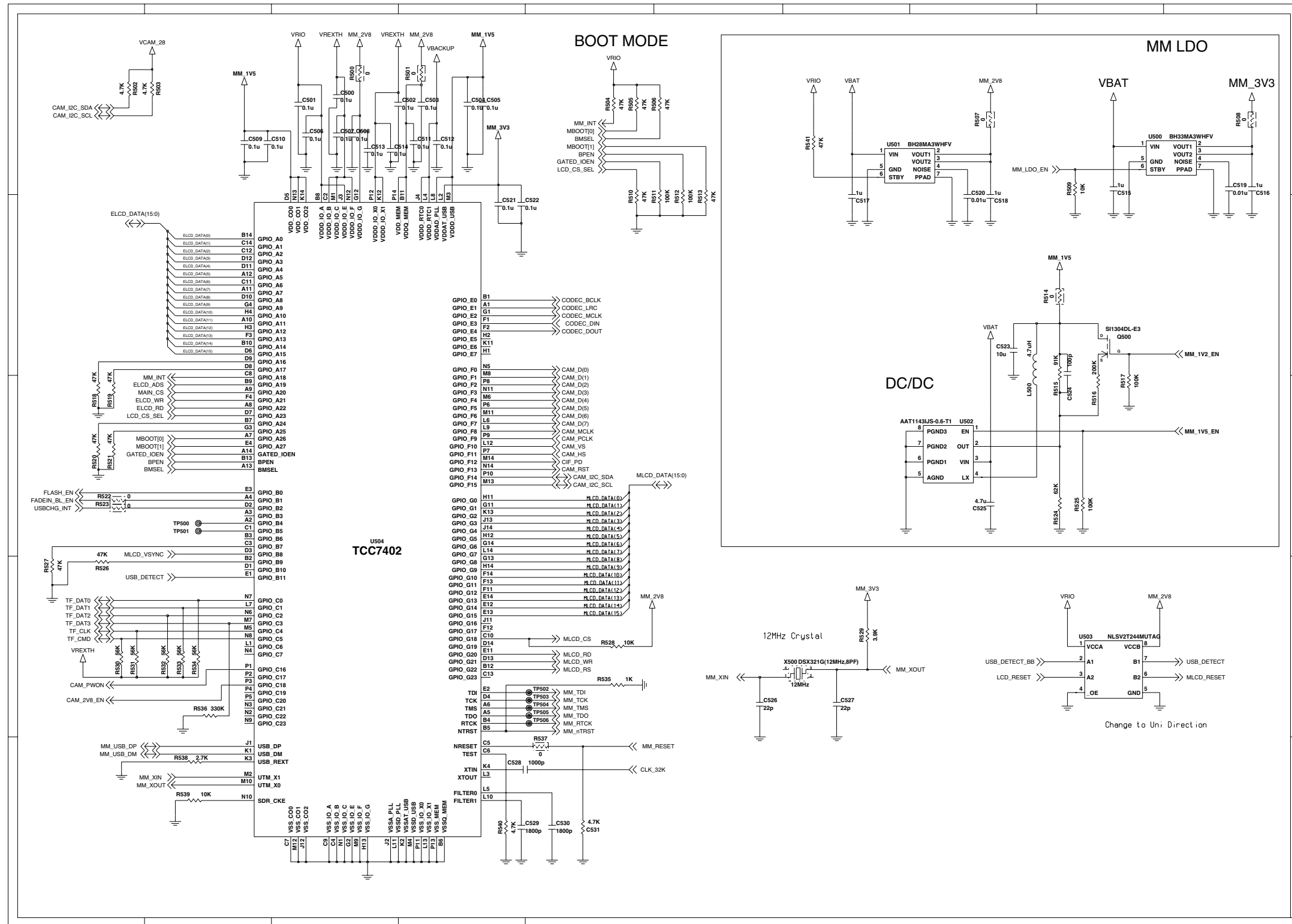
7. CIRCUIT DIAGRAM



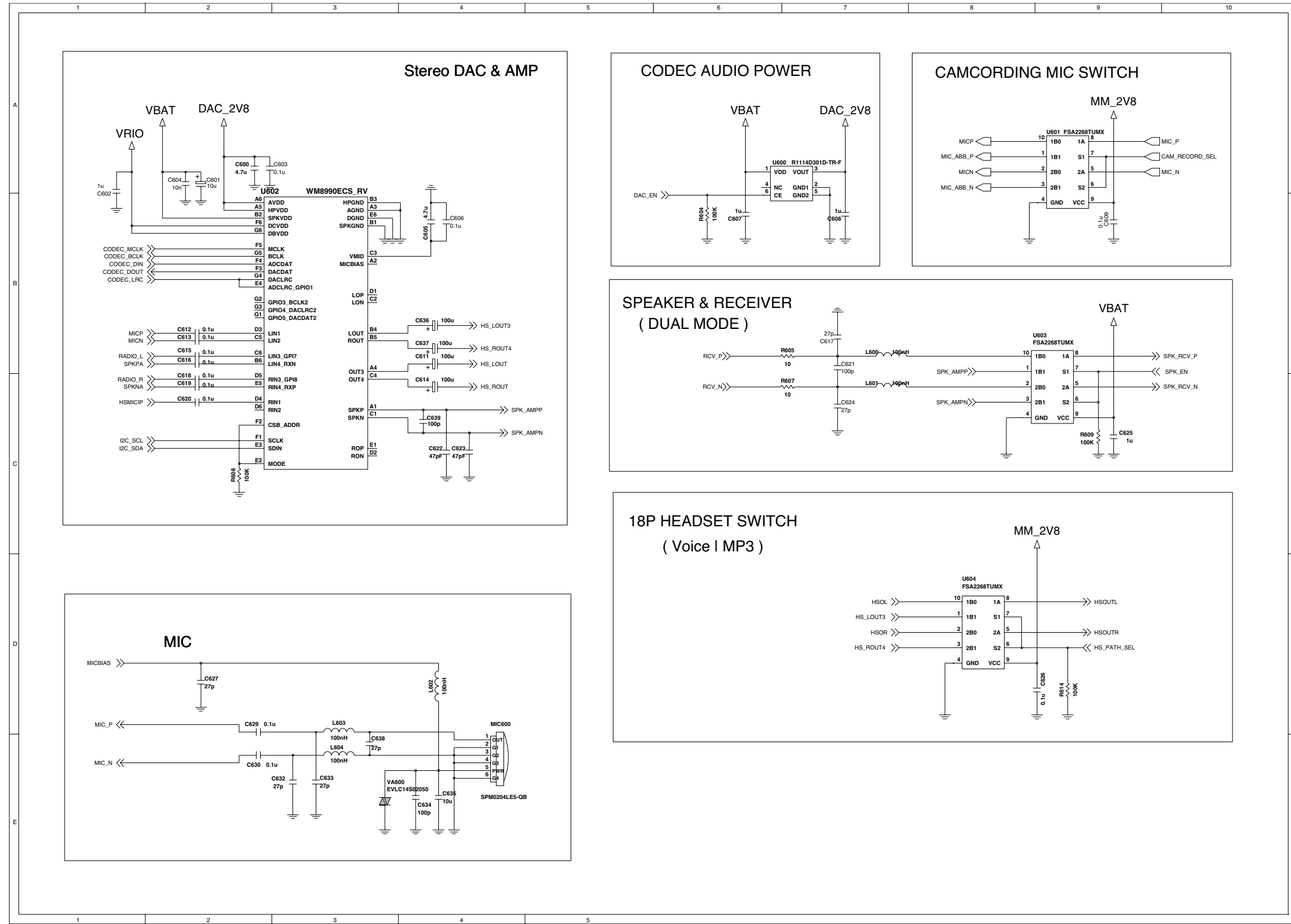
7. CIRCUIT DIAGRAM



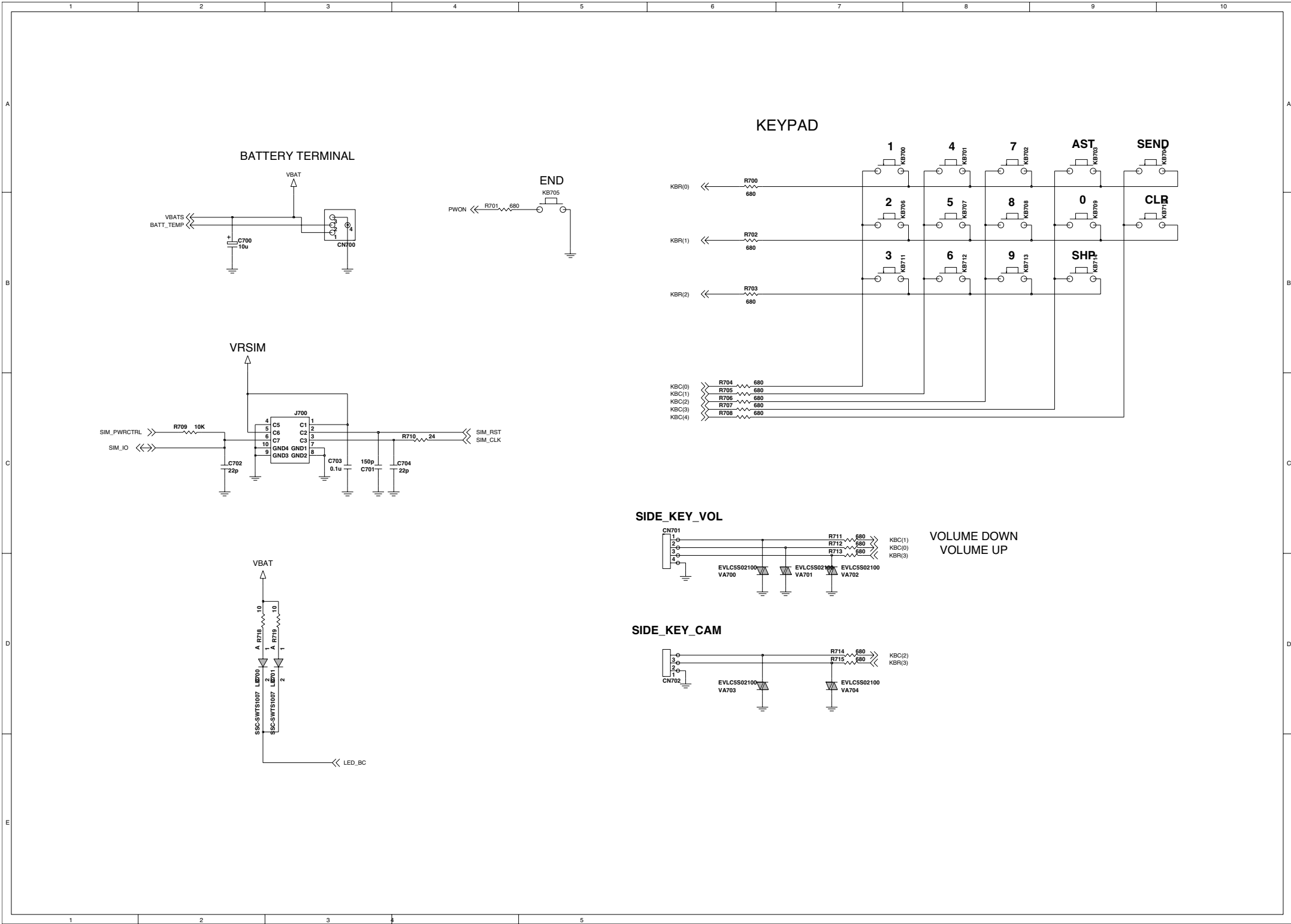
7. CIRCUIT DIAGRAM



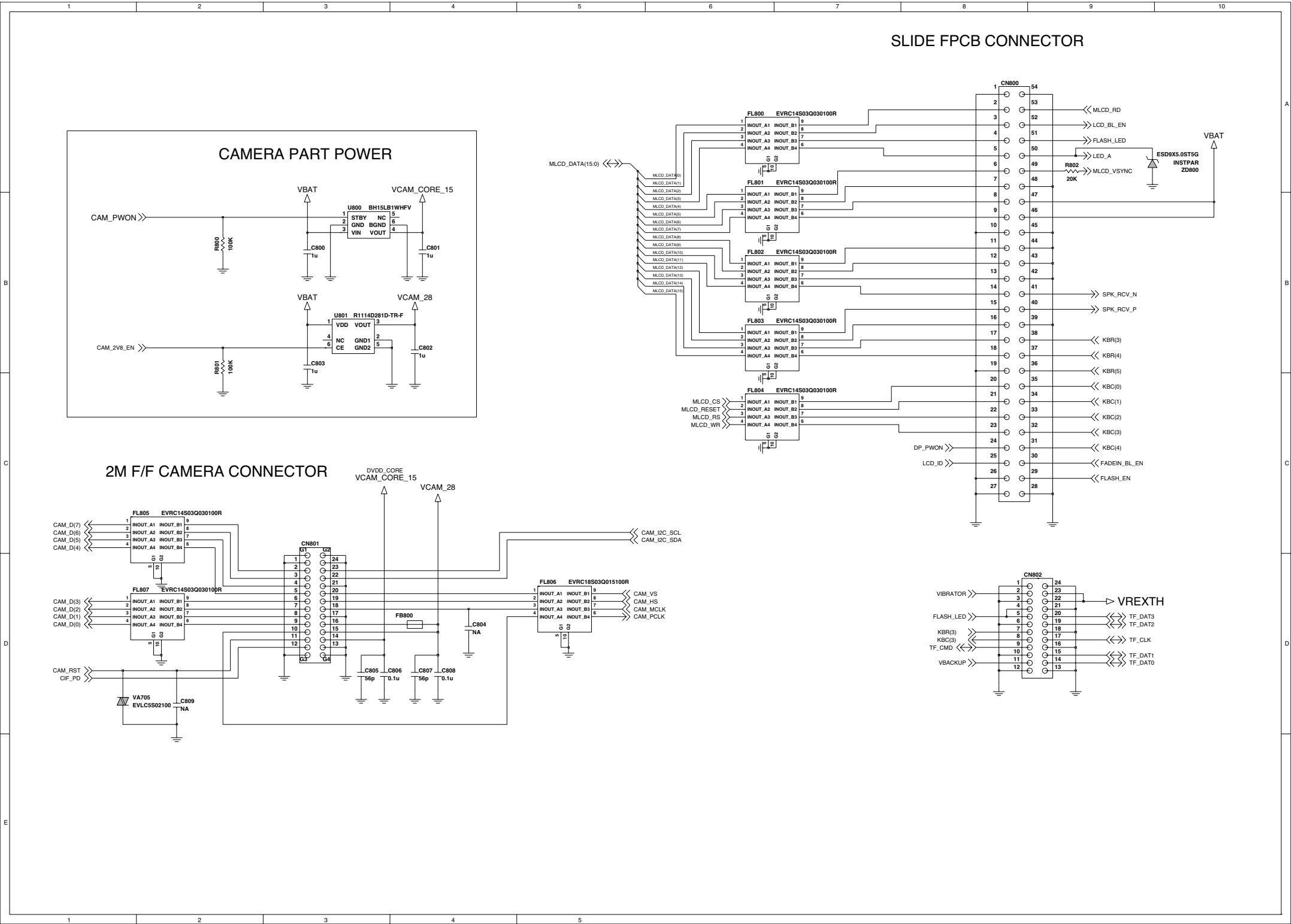
7. CIRCUIT DIAGRAM



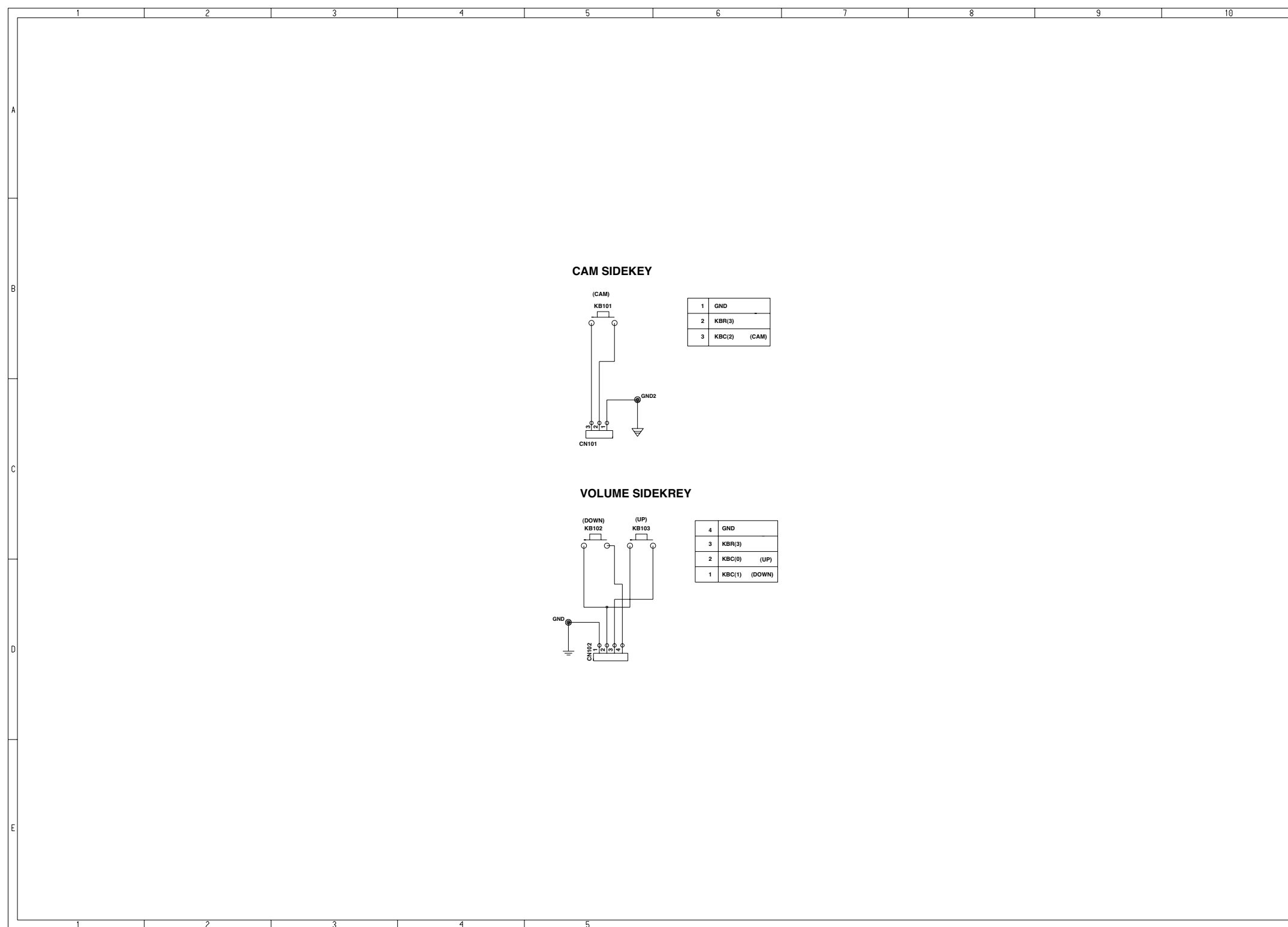
7. CIRCUIT DIAGRAM



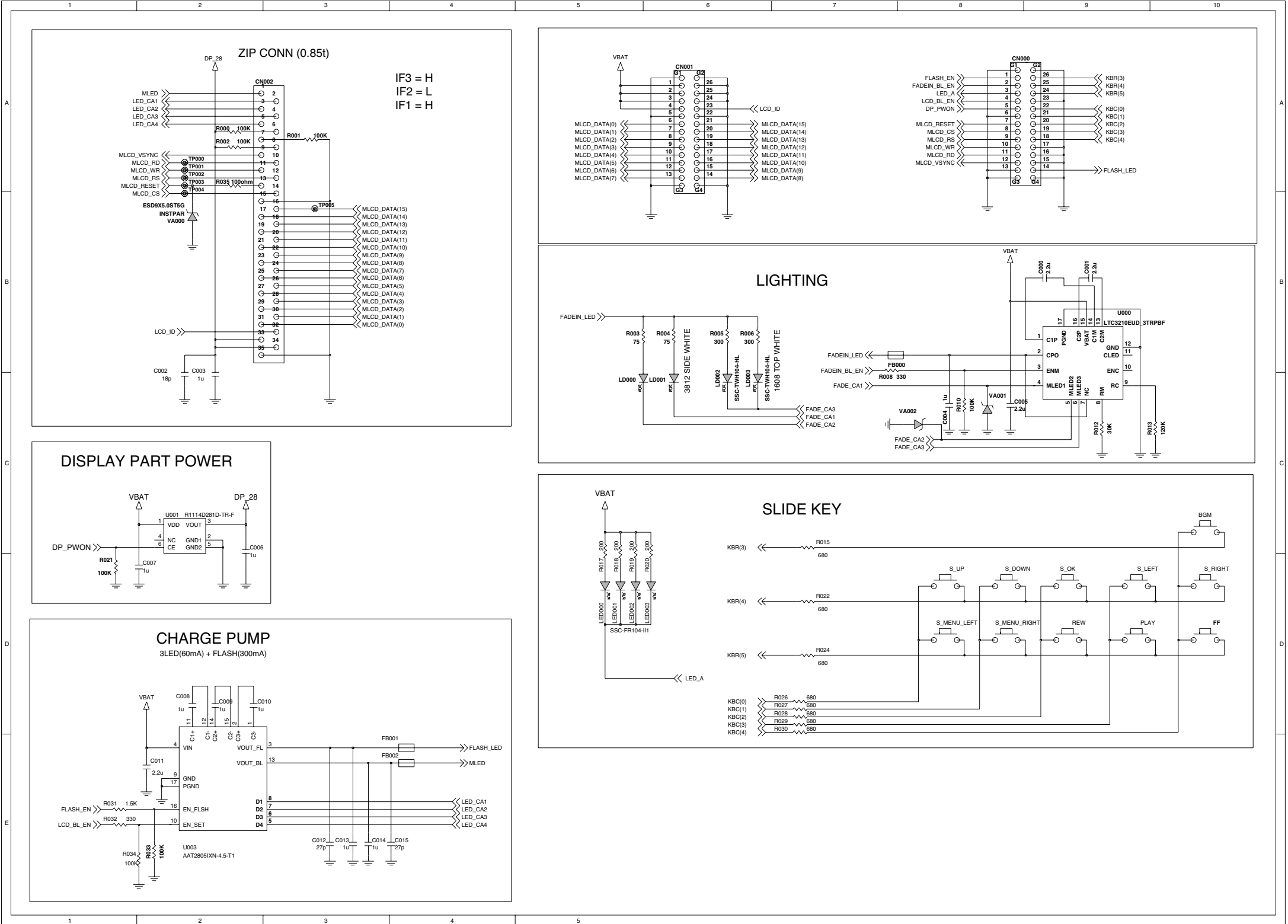
7. CIRCUIT DIAGRAM



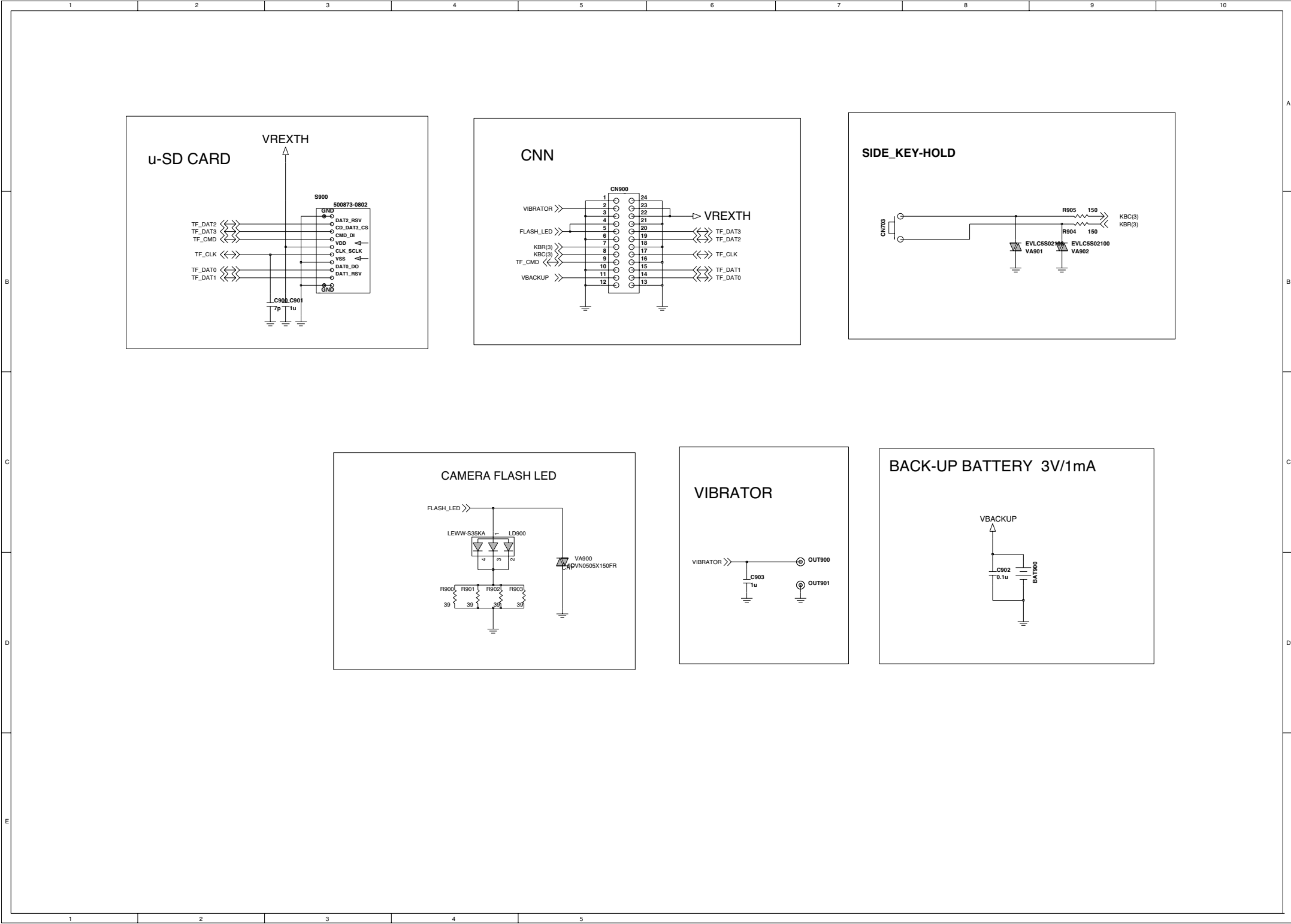
7. CIRCUIT DIAGRAM



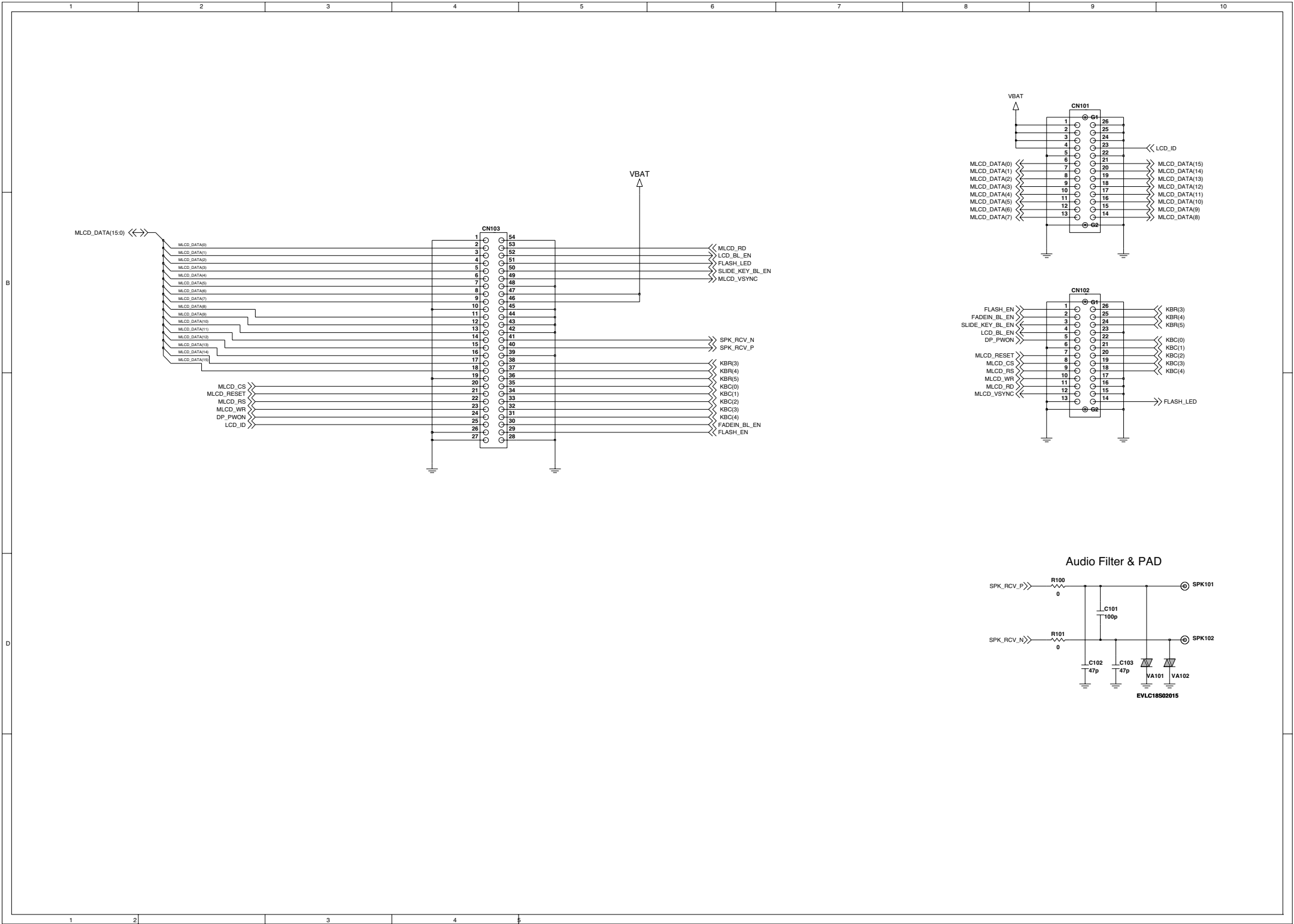
7. CIRCUIT DIAGRAM



7. CIRCUIT DIAGRAM

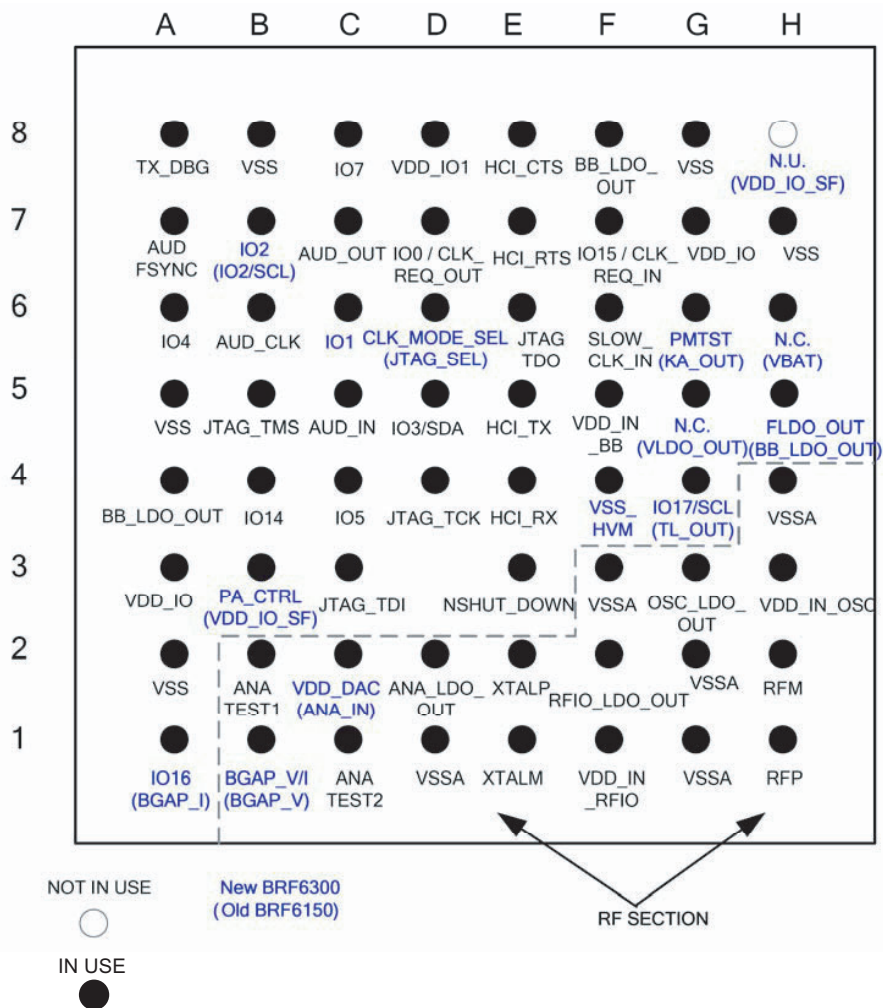


7. CIRCUIT DIAGRAM



8. BGA IC Pin Check

Bluetooth IC: BRF6300



Default Terminal Function	64 BGA pack.	Pull @ reset	I/O Type (1)	ESD (KV) (2)	Buffer Type (3)	Description of options
HCI_RX	E4	PU	I	2	B, C	HCI UART data receive (Input)
SDIO_CMD			IO			SDIO command
HCI_TX	E5	PU	O	2	B, C	HCI UART data transmit
SDIO_DATA			IO			SDIO data
HCI_RTS	E7	PU	O	2	A, C	HCI UART request-to-send
SDIO_IRQ			IO			SDIO interrupt
HCI_CTS	E8	PU	I	2	B, C	HCI UART clear-to-send

8. BGA IC Pin Check

AUD_FSYNC	A7	PD	IO	2	A, C	PCM frame synchronization control (O-master, I-slave)
AUD_CLK	B6	PD	IO	2	B, C	PCM clock (O-master, I-slave)
AUD_IN	C5	PD	I	2	A, C	PCM audio data input
AUD_OUT	C7	PD	O	2	B, C	PCM audio data output
JTAG_TMS	B5	PU	I	2	B, C	JTAG test mode
JTAG_TCK	D4	PD	I	2	B, C	JTAG test clock
JTAG_TDO	E6	PD	IO	2	B, C	JTAG test data out / JTAG mode select: See 2.12 below.
JTAG_TDI	C3	PU	I	2	B, C	JTAG test data in
CLK_MODE_SEL	D6	--	I	2	B	Clock sharing mode selection.
TX_DBG	A8	PU	O	2	A, C	Default: Debug UART data transmit. Options: RF_SD*, BT_FREQ*, EXT_PA_CMD1, EXT_PA_CMD2, nEXT_PA_EN, * Not recommended due to PU.
IO0/EXT_CLK_REQ_OUT	D7	PD	IO	2	A	Default: External clock request output. Options: GPIO0
IO1	C6	PD	IO	2	A, C	Default: GPIO1 Options: RF_SD
IO2	B7	PD	IO	2	A, C	Default: GPIO2 Options: SYS_SYNC, EXT_PA_CMD1.
IO3/SDA	D5	PU	IO	2	A, C	Default: GPIO3/ SDA-I2C data (BRF6300 master) Options: BT_FREQ, EXT_PA_CMD2.
IO4	A6	PD	IO	2	B, C	Default: GPIO4 Options: BT_PRI_DATA, EXT_PA_CMD1.
IO5	C4	PD	IO	2	B, C	Default: GPIO5 Options: BT_PA_ON_or_RX, SYS_SYNC
IO7 (BT_WAKEUP)	C8	PD	IO	2	A, C	Default: GPIO7 Options: EXT_PA_CMD2
SDIO_CLK			I			SDIO clock input
IO14	B4	PD	IO	2	A, C	Default: GPIO14 Options: EXT_PA_EN, PA_ON_or_RX.
IO15/EXT_CLK_REQ_IN	F7	PD	IO	2	A	Default: GPIO15 / external clock request input Options: nEXT_PA_EN, EXT_PA_CMD2.
IO16	A1	PU	IO	2	A, C	Default: GPIO16 Options: nEXT_PA_EN, BT_FREQ.
IO17/SCL	G4	PD	IO	2	A, C	Default: GPIO / SCL/ -I2C data (BRF6300 master) Options: EXT_PA_CMD1
SLOW_CLK_IN	F6	--	I	2	A	32.768 KHz clock input
XTALM	E1	--	I	2		Negative fast crystal in
XTALP/FAST_CLK_IN	E2	--	I	2		Positive fast crystal in \ Fast clock input
RFP	H1	--	ANA	1		Receive/Transmit differential RF IO
RFM	H2	--	ANA	1		Receive/Transmit differential RF IO
ANATEST1	B2	--	ANA	2		Analog tests - TI use only
ANATEST2	C1	--	ANA	2		Analog tests - TI use only
VDD_DAC	C2	--	ANA	2		Internal DAC supply voltage - Class 1 external PA analog control
PA_CTRL	B3	--	ANA	2		External PA analog control
N.U. (BRF6150: VLDO_OUT)	G5	--	P	2		G5 internally connected to H6 to maintain pin compatibility with BRF6150 designs.
N.U. (BRF6150: VBAT)	H6	--	P	2		For new BRF6300 designs - must be left unconnected.
PMTEST	G6	--	P	2		Power management test - TI use only.

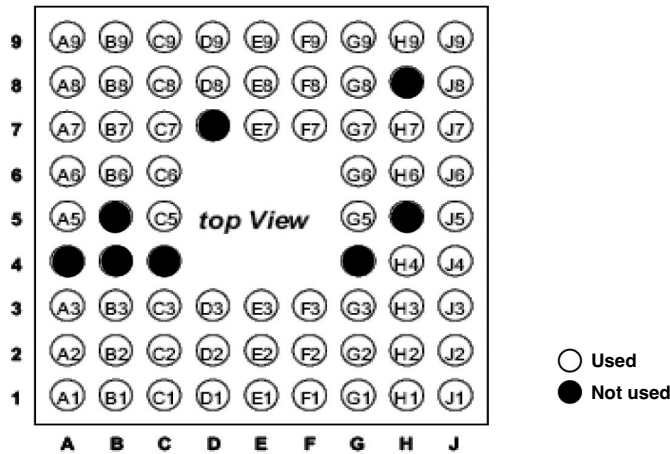
8. BGA IC Pin Check

nSHUT_DOWN	E3		I	2		Device shut down input (active low), also acts as Power On Reset
VDD_IO	D8	--	P	2		I/O power supply
VDD_IO	G7	--	P	2		I/O power supply
VDD_IO	A3	--	P	2		I/O power supply
N.C.	H8	--	P	2		
BB_LDO_OUT	F8	--	P	2		Baseband LDO output
FLDO_OUT	H5	--	P	2		FLDO output
BB_LDO_OUT	A4	--	P	2		Baseband LDO output
BB_LDO_OUT		--	P	2		Baseband LDO output
ANA_LDO_OUT	D2	--	P	2		Analog LDO out
RFIO_LDO_OUT	F2	--	P	2		RFIO LDO output
OSC_LDO_OUT	G3	--	P	2		OSC LDO output
VDD_IN_BB	F5	--	P	1		Baseband LDO input (VDD_IN power supply)
VDD_IN_RFIO	F1	--	P	2		RFIO LDO Input (VDD_IN power supply)
VDD_IN_OSC	H3	--	P	1		OSC LDO input (VDD_IN power supply)
BGAP_V/I	B1	--	P	2		BGAP reference - TI use only.

Terminal Name	64 BGA pack.	pull @ reset	I/O Type (1)	ESD	Buffer Type (3)	Description
VSS	B8	--	P	--		Digital Ground
VSS	G8	--	P	--		Digital Ground
VSS	H7	--	P	--		Digital Ground
VSS	A5	--	P	--		Digital Ground
VSS	A2	--	P	--		Digital Ground
VSS_HVM	F4	--	P	--		Digital high-voltage-module Ground
VSSA	H4	--	P	--		Analog Ground
VSSA	D1	--	P	--		Analog Ground
VSSA	G1	--	P	--		RF Analog Ground
VSSA (VSSDCO)	G2	--	P	--		RF Analog Ground
VSSA	F3	--	P	--		RF analog Ground

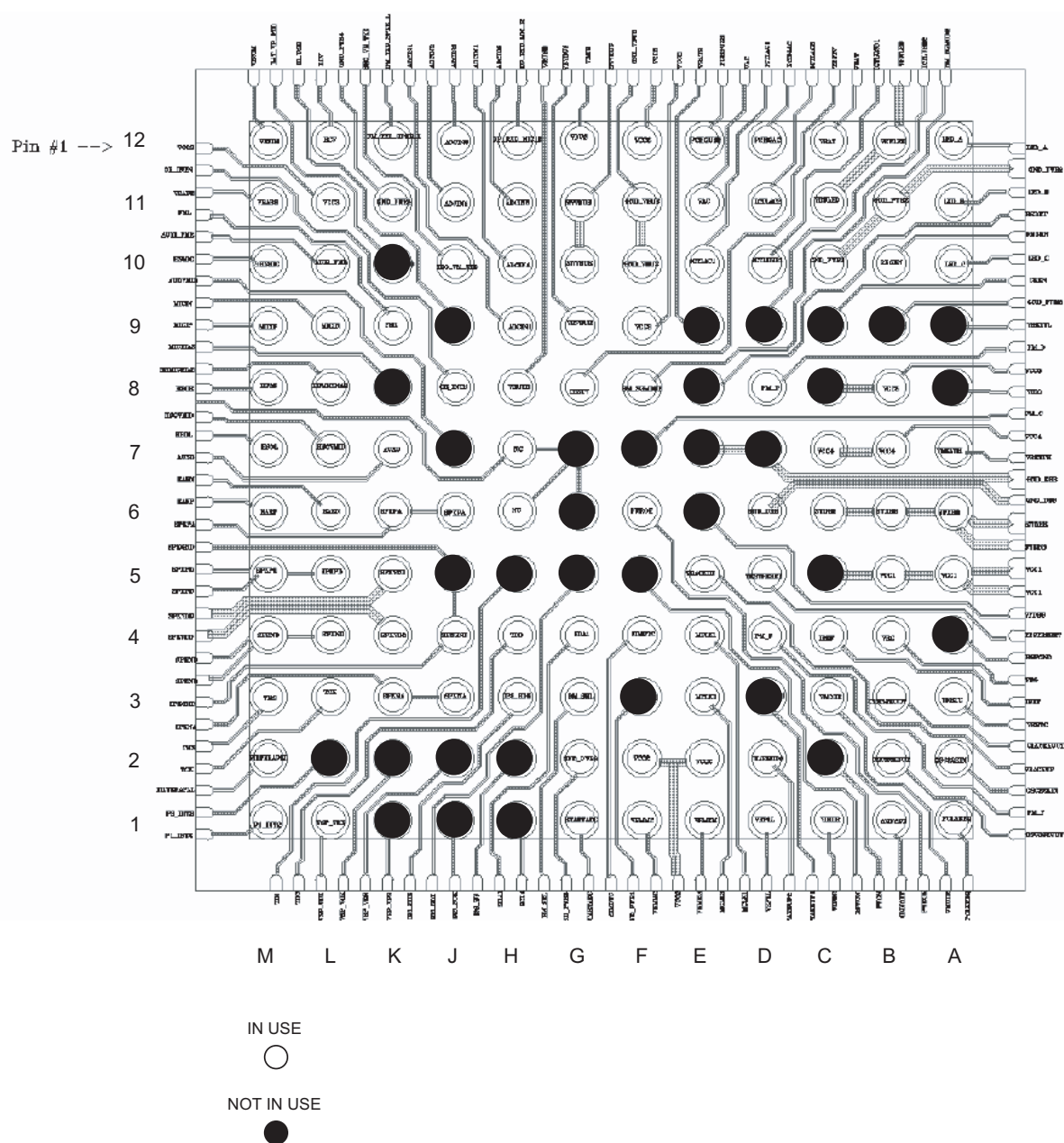
8. BGA IC Pin Check

TRANSCEIVER: R2A60167BG



Pin No.	Pin name	Description	Pin No.	Pin name	Description
A1	PCSLNAI	Positive input for LNA transistor (PCS)	G5	GNDTX2	GND for Tx block 2
B1	PCSLNAIB	Negative input for LNA transistor (PCS)	H5	AUXCLKEN	Enable to control Sysclk, AUXCLK1 and AUXCLK2
C1	DCSLNAI	Positive input for LNA transistor (DCS)	J5	VCCTX2	VCC for Tx block 2
D1	DCSLNAIB	Negative input for LNA transistor (DCS)	A6	VCCAD	VCC for ADC
E1	G90LNAI	Positive input for LNA transistor (GSM900)	B6	VCCBB	VCC for Baseband
F1	G90LNAIB	Negative input for LNA transistor (GSM900)	C6	GNDBBAD	GND for Baseband and ADC
G1	G85LNAI	Positive input for LNA transistor (GSM850)	G6	TEST1	Selection for Sleep mode
H1	G85LNAIB	Negative input for LNA transistor (GSM850)	H6	GNDTXVCO	GND for TXVCO
J1	DMIXINB	Input for power amplifier feedback signal 2	J6	VCCTXVCO	VCC for TXVCO
A2	VCCLNA	VCC for LNA transistor and LNA Bias	A7	VCCRF5YN	VCC for RF synthesiser
B2	PCSGND	GND for Emitter of LNA transistor (PCS)	B7	CAFC	Capacitor for AFCDAC LPF
C2	PCSDCSGND	GND for Emitter of LNA transistor (PCS,DCS)	C7	GNDRF5YN	GND for RF synthesiser
D2	DCSG90GND	GND for Emitter of LNA transistor (DCS,GSM900)	D7	AUXCLK2	Output of buffer for VCXO
E2	G90G85GND	GND for Emitter of LNA transistor (GSM900,GSM850)	E7	GNDLOGIC	GND for DigRF and control logic of Analog block
F2	G85GND	GND for Emitter of LNA transistor (GSM850)	F7	CLOGIC1	Internal VCC for Sleep mode
G2	GNDLNA_TX1	GND for LNA Bias and Tx block1	G7	RXTXEN	Enable for RxTxData
H2	TXON	Control signal for HPA	H7	GNDTXVCO_B	GND for TXVCO Output Buffer
J2	DMIXIN	Input for power amplifier feedback signal 1	J7	TXOUTG	TX output for GSM
A3	VCCRFLO	VCC for RF Local Buffer and Divider	A8	VCCVCXOR	VCC for VCXO register and AFCDAC register
B3	VCCMIX	VCC for Direct conversion Mixer	B8	VCXTXCO	VCXO/TCXO select pin
C3	GNDRFLO	GND for RF Local Buffer and Divider	C8	GNDVCXO	GND for VCXO
D3	GNDMIX	GND for Direct conversion Mixer	D8	AUXCLK1	Output of buffer for VCXO
E3	GNDDMIXIN	GND for Input of power amplifier feedback signal 1 and2	E8	STROBE	Control to kick the word
F3	TXBAND	Control signal for HPA	F8	SYSCLK	System Clock
G3	FEMC2	Vc(DCS/PCS) of FEM	G8	CTRLDATA	Serial Data
H3	FEMC1	Vc(GSM850/EGSM) of FEM	H8	VBAT_IN	N.C. or Connect to VCC or GND (Recommended to VCC or GND)
J3	VCCFEMC	VCC for FEM control output	J8	TXOUTD	TX output for DCS/PCS
A4	IOUTB_IINB	QOUTB(Rx), IINB(Tx) (*1)	A9	XOP	Base of VCXO transistor
B4	IOUT_IIN	QOUT(Rx), IIN(Tx) (*1)	B9	XON	Connect X'tal between VCXOP and VCXON
C4	QOUT_QIN	IOUT(Rx), QIN(Tx) (*1)	C9	VCCVCXO	VCC for VCXO
G4	TXMODE	Control signal for HPA	D9	VCCLOGIC2	VCC for control LOGIC of Analog block
H4	LDO_CONT	LDO control output	E9	VCCLOGIC1	VCC for DigRF(1.8V)
J4	VCCTX1	VCC for Tx block 1	F9	RXTXDATA	RxTxData signal
A5	VCCRFVCO	VCC for RFVCO	G9	CTRLCN	enable for serial data
B5	QOUTB_QINB	IOUTB(Rx), QINB(Tx) (*1)	H9	CTRLCL	Clock for serial data
C5	GNDRFVCO	GND for RFVCO	J9	SYSCLKEN	Control for Sleep mode

Analog Base Band

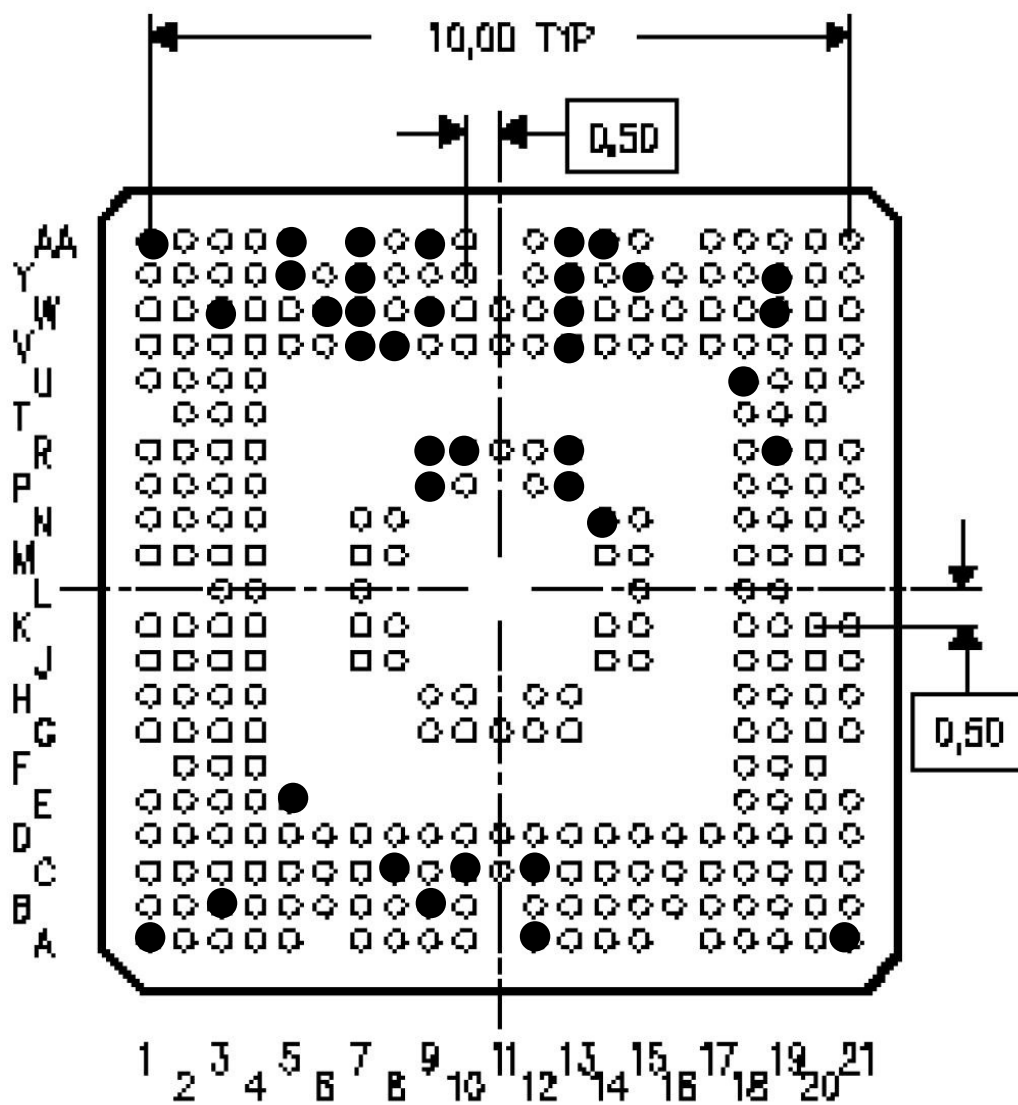


8. BGA IC Pin Check

Analog Base Band

Ball Number	Signal Name	E2	HSMICBIAS	J4	SPKGND
A1	VRSIM	E3	MICBIAS	J5	TDO
A2	RCV	E4	OE_INTN	J6	SDA1
A3	DM_TXD_SPKR_L	E5	VRUSB	J7	SIMDTC
A4	ADCIN3	E6	TESTV	J8	MCLK1
A5	DP_RXD_MIC_R	E7	BM_PRECH	J9	PM_F
A6	VBUS	E8	HSDDET	J10	IREF
A7	VCC6	E9	PM_D	J11	VBG
A8	PCHGUSB	E10	VCC5	J12	REFGND
A9	PCHGAC	E11	VCC5	K1	TMS
A10	VBAT	E12	VRIO	K2	TCK
A11	VRWLED	F1	HSOL	K3	SPKNA
A12	LED_A	F2	HSOV/MID	K4	SPKNA
B1	VRABB	F3	AUXO	K5	I2S_SDR
B2	VCC3	F4	AUDV/MID	K6	BM_SEL
B3	GND_PWR4	F5	NC	K7	GND_PWR1
B4	ADCIN2	F6	NC	K8	NC
B5	ADCIN5	F7	PM_C	K9	WAKEUP1
B6	SWVBUS	F8	GND_DBB	K10	VMODE
B7	GND_VBUS	F9	GND_DBB	K11	CLK32KOUT
B8	VAC	F10	VCC4	K12	VRRTC
B9	ICTLAC2	F11	VCC4	L1	FILTERAPLL
B10	VRWLED	F12	VREXTH	L2	P2_INT2
B11	GND_PWR2	G1	EARP	L3	VSP_VCK
B12	LED_B	G2	EARN	L4	VSP_VDR
C1	HSMIC	G3	SPKPA	L5	I2S_WS
C2	AUXI_FMR	G4	SPKPA	L6	GND_PWR3
C3	DAT_VP_RXD	G5	NC	L7	VCC2
C4	SE0_VM_TXD	G6	NC	L8	VCC2
C5	ADCIN4	G7	PWROK	L9	WAKEUP2
C6	SWVBUS	G8	VFDBB	L10	PWON
C7	GND_VBUS	G9	GND_DBB	L11	OSC32KOUT
C8	ICTLAC1	G10	SWDBB	L12	OSC32KIN
C9	ICTLUSB1	G11	SWDBB	M1	P1_INT2
C10	GND_PWR2	G12	SWDBB	M2	VSP_VDX
C11	REGEN	H1	SPKPD	M3	VSP_VFS
C12	LED_C	H2	SPKPD	M4	I2S_SCK
D1	MICIP	H3	SPKVDD	M5	SCL1
D2	MICIN	H4	SPKGND	M6	STARTADC
D3	FML	H5	TDI	M7	VRMMC
D4	ID_USB	H6	I2S_SDV	M8	VRMEM
D5	ADCIN1	H7	RPWON	M9	VRPLL
D6	VRVBUS	H8	VBACKUP	M10	VIBDR
D7	VCCS	H9	TESTRESET	M11	ONNOFF
D8	VBATS	H10	VCC1	M12	PCLKREQ
D9	ICTLUSB2	H11	VCC1		
D10	CKEN	H12	VCC1		
D11	GND_PWR5	Ball Number	Signal Name		
D12	VREXTL	J1	SPKND		
Ball Number	Signal Name	J2	SPKND		
E1	HSOR	J3	SPKVDD		

Digital Base Band



IN USE



NOT IN USE



8. BGA IC Pin Check

Digital Base Band

Config 0						
I/F	# pins func	VDDSHV	Gp #	other Pwr	Pkg Ball #	Triton Source
EMIFF	42	4	1			VRMEM
EMIFS	35	3	2			VRMEM
USIM	4	1	3	1		VRUSIM
MMCSIO1	6	1	4	1		VRMMC
Slicer	1					VRPLL
ULPDR on off	1	1	6			VRDBB
Serial Radio I/F	13	10*	5/7			VRIO
KB	12					VRIO
Camera	12					VRIO
Test	8					VRIO
I2C	2					VRIO
UART2	2					VRIO
SPI	4					VRIO
ELCD	24					VRIO
TSP	2					VRIO
MCSI2	4					VRIO
Misc/GPIOs	19					VRIO
UART3	4					VRIO
MCSI1	4					VRIO
USB	4					VRIO
ULPDR	4					VRIO
McBSP1	4					VRIO
VSS				23		
VDD				22		VRDBB
VDD4				1		VRDBB
VDDDPLL				1		VRPLL
VSSDPLL				1		
VDDDLL				1		VRDBB
VSSDLL				1		
VDDAPLL/Slicer				1		VRPLL
VSSAPLL/Slicer				1		
VSSPBIAS				1		
VPP				2		
Subtotal	87	9		2		
Subtotal	2	1				
Subtotal	122	10				
Subtotal				55		
TOTAL	211	20		57	288	
VSS corners					5	
Package					293	

8. BGA IC Pin Check

Digital Base Band

Table 10. I/O pin mapping

BGA Address	Lead Number	BGA Name	Power Domain	PUPD Type	PUPD Reset	DIR	IO Cell
B2	1	vdds1	vdds1			P	
E4	2	sdram_nsras	vdds1			O	OC1825DS
D3	3	sdram_sdata6	vdds1			IO	BQ0021S
B1	4	sdram_sdata0	vdds1			IO	BQ0021S
C2	5	sdram_sdata4	vdds1			IO	BQ0021S
F4	6	sdram_sclk_en	vdds1		PD	O	OC1825DS
C1	7	sdram_sdata2	vdds1			IO	BQ0021S
E3	8	sdram_nsdqmu	vdds1			O	OQ0028S
D2	9	vdd	vdds1			P	
D1	10	vss	vdds1			P	
G4	11	sdram_sbank1	vdds1			O	OC1825DS
F3	12	sdram_nsdqml	vdds1			O	OQ0028S
E1	13	vdd	vdds1			P	
E2	14	vss	vdds1			P	
H4	15	sdram_sbank0	vdds1			O	OC1825DS
G3	16	vdds1	vdds1			P	
F2	17	sdram_sdata3	vdds1			IO	BQ0021S
J8	18	sdram_sadd1	vdds1			O	OC1825DS
H3	19	sdram_nscas	vdds1			O	OC1825DS
G2	20	vdd	vdds1			P	
J7	21	sdram_sadd3	vdds1			O	OC1825DS
H2	22	vss	vdds1			P	
G1	23	sdram_sdata5	vdds1			IO	BQ0021S
J4	24	sdram_dqs1	vdds1	PUPD	PU	IO	BQ0054S
J3	25	sdram_nswc	vdds1		PU	O	OC1825DS
H1	26	vssdpll	vdds1			P	
J2	27	vdddpll	vdds1			P	

8. BGA IC Pin Check

Digital Base Band

K7	28	sdram_sadd0	vddel			O	OC1825DS
J1	29	sdram_sdata12	vddel			IO	BQ0021S
K4	30	sdram_cs	vddel		PU	O	OC1825DS
K2	31	vdd	vddel			P	
K1	33	vss	vddel			P	
K3	34	sdram_sclk	vddel			IO	BQ0021S
K8	35	sdram_sadd2	vddel			O	OC1825DS
L4	36	vddel	vddel			P	
L3	37	sdram_dqch	vddel	PUPD	PU	IO	BQ0054S
L7	38	sdram_sadd10	vddel			O	OC1825DS
M4	39	sdram_sadd11	vddel			O	OC1825DS
M3	40	sdram_sdata1	vddel			IO	BQ0021S
M7	41	sdram_sadd8	vddel			O	OC1825DS
M8	42	sdram_sadd5	vddel			O	OC1825DS
M1	43	sdram_sdata14	vddel			IO	BQ0021S
M2	44	sdram_sdata10	vddel			IO	BQ0021S
N3	45	vddel	vddel			P	
N1	46	vssdel	vddel			P	
N4	47	sdram_sclkx	vddel		PU	O	OQ0028S
N2	48	sdram_sdata13	vddel			IO	BQ0021S
P1	49	vss	vddel			P	
P3	50	vddel	vddel			P	
P2	51	sdram_sdata8	vddel			IO	BQ0021S
R1	52	vdd4	vddel			P	
N7	53	sdram_sadd7	vddel			O	OC1825DS
N8	54	sdram_sadd4	vddel			O	OC1825DS
R2	55	sdram_sdata7	vddel			IO	BQ0021S
R3	56	sdram_sdata9	vddel			IO	BQ0021S
P4	57	sdram_sadd9	vddel			O	OC1825DS
T2	58	vdd	vddel			P	
T3	59	vss	vddel			P	
R4	60	sdram_sadd6	vddel			O	OC1825DS
U2	61	sdram_sdata11	vddel			IO	BQ0021S
U1	62	sdram_sdata15	vddel			IO	BQ0021S
T3	63	sdram_sadd12	vddel			O	OC1825DS
T4	64	vdda	vdda			P	
V1	65	slicer_in	vdda			IO	BAFTHRUDD12S
V2	66	vssa	vdda			P	
U4	67	sim_rst	vdda3	PUPD		IO	BQ0152S
W1	68	sim_clk	vdda3	PUPD		IO	BQ0152S
V3	69	sim_io	vdda3	PUPD	PD	IO	BQ0152S
W2	70	vss	vdda3			P	
V1	71	Vdda3	vdda3			P	
V4	72	sim_pwrctl	vdda3	PUPD		IO	BQ0152S
W3	73	sim_pbias	vdda3			IO	BAFTHRU33S
V2	75	Vdda2	Vdda2			P	
V3	76	smifs_sdata 0	vdda2			IO	BC1825DS

8. BGA IC Pin Check

Digital Base Band

W4	77	emifs_fdata_1	vdds2			IO	BC1825DS
AA2	78	vdd	vdd			P	
Y3	79	emifs_fdata_2	vdds2			IO	BC1825DS
V6	80	emifs_fdata_3	vdds2			IO	BC1825DS
AA3	81	emifs_fdata_4	vdds2			IO	BC1825DS
W5	82	emifs_fdata_5	vdds2			IO	BC1825DS
Y4	83	emifs_fdata_6	vdds2			IO	BC1825DS
AA4	84	emifs_fdata_7	vdds2			IO	BC1825DS
V7	85	emifs_fdata_8	vdds2			IO	BC1825DS
W6	86	emifs_fdata_9	vdds2			IO	BC1825DS
AA5	87	emifs_fdata_10	vdds2			IO	BC1825DS
Y5	88	emifs_fdata_11	vdds2			IO	BC1825DS
V8	89	emifs_fdata_12	vdds2			IO	BC1825DS
W7	90	emifs_fdata_13	vdds2			IO	BC1825DS
Y6	91	emifs_fdata_14	vdds2			IO	BC1825DS
P9	92	emifs_fdata_15	vdds2			IO	BC1825DS
W8	93	vdds2	vdds2			P	
Y7	94	emifs_fclk	vdds2			IO	BQ0021S
R9	95	emifs_fadd_17	vdds2			IO	BC1850CSHY
Y8	96	emifs_fadd_18	vdds2			IO	BC1850CSHY
AA7	97	emifs_fadd_19	vdds2			IO	BC1850CSHY
V9	98	emifs_nfcs_3	vdds2	PU	PU	IO	BC1850CSHYPU
W9	99	emifs_fadd_20	vdds2			IO	BC1850CSHY
AA8	100	vss	vdds2			P	
Y9	101	vdd	vdds2			P	
R10	102	emifs_fadd_21	vdds2			IO	BC1850CSHY
AA9	103	emifs_nfrp	vdds2		PD	O	OC1850CS
V10	104	emifs_fadd_22	vdds2			IO	BC1850CSHY
Y10	105	vdds2	vdds2			P	
AA10	107	emifs_fadd_23	vdds2			IO	BC1850CSHY
W10	108	emifs_fadd_24	vdds2			IO	BC1850CSHY
P10	109	emifs_fadd_25	vdds2	PU	PU	IO	BC1850CSHYPU
V11	110	emifs_nfoe	vdds2			O	OC1850CS
W11	111	emifs_frty	vdds2	PU	PU	IO	BC1850CSHYPU
R11	112	emifs_nfadv	vdds2			O	OC1850CS
V12	113	emifs_nfbe_0	vdds2			IO	BC1850CSHY
W12	114	emifs_nfbe_1	vdds2			IO	BC1850CSHY
R12	115	emifs_nfiwe	vdds2			O	OC1850CS
P12	116	emifs_nfwf	vdds2			O	OC1850CS
AA12	117	gpio_19	vdds2	PU	PU	IO	BC1850CSHYPU
Y12	118	gpio_43	vdds2			IO	BC1850CSHY
W13	119	nmnc1_dat0	vdds4	PUPD	PD	IO	BQ0152S
AA13	120	nmnc1_dat1	vdds4	PUPD	PD	IO	BQ0152S
V13	121	nmnc1_dat2	vdds4	PUPD	PD	IO	BQ0152S
Y13	122	nmnc1_pbias	vdds4			IO	BAFTHRU33S
AA14	123	nmnc1_clk	vdds4	PUPD	PD	IO	BQ0152S
W14	124	vdds4	vdds4			P	

8. BGA IC Pin Check

Digital Base Band

Y14	125	vsspbias	vdds4			P	
AA15	126	vss	vdds4			P	
R13	127	mmc1_cmd	vdds4	PUPD	PD	IO	BQ0152S
P13	128	gpio_33	vdds4	PUPD	PU	IO	BQ0152S
Y15	129	mmc1_dat3	vdds4	PUPD	PD	IO	BQ0152S
W15	130	vdd	vdds5			P	
V14	131	ulpdr_clk32k_in	vdds5			I	IC18SHY
Y16	132	gpio_10	vdds5	PU	PU	IO	BC1825DSHYPU
W16	133	usb_0_rcv	vdds5	PD		IO	BC1850CSHYPD
V15	134	usb_0_se0	vdds5	PUPD		IO	BQ0057S
Y17	135	usb_0_txen	vdds5	PD		IO	BC1850CSHYPD
AA17	136	usb_0_dat	vdds5	PUPD		IO	BQ0057S
W17	137	gpio_8	vdds5	PUPD		IO	BQ0054S
V16	138	gpio_9	vdds5	PUPD		IO	BQ0054S
AA18	139	uart2_tx	vdds5			IO	BQ0021S
Y18	140	gpio_13	vdds5	PD	PD	IO	BC1825DSHYPD
V17	141	gpio_16	vdds5	PD		IO	BC1825DSHYPD
AA19	142	tsp_act0	vdds5			IO	BQ0021S
W18	143	uart2_rx	vdds5	PU	PU	IO	BC1825DSHYPU
Y19	144	spi_clk	vdds5			IO	BQ0021S
AA20	145	vdds5	vdds5			P	
V18	146	spi_data_mosi	vdds5	PD	PD	IO	BC1825DSHYPD
W19	147	spi_data_miso	vdds5	PD	PD	IO	BC1825DSHYPD
AA21-Y20	149	vss	vdds5			P	
U18	150	spi_ncs0	vdds5	PUPD	PU	IO	BQ0054S
V19	151	gpio_18	vdds5	PUPD	PD	IO	BQ0054S
Y21	152	vdd	vdds5			P	
W20	153	vdds5	vdds5			P	
T18	154	ulpdr_arm_boot_ext	vdds5	PUPD	PD	IO	BQ0054S
W21	155	gpio_1	vdds5	PUPD	PD	IO	BQ0054S
U19	156	gpio_4	vdds5	PUPD		IO	BQ0054S
V20	157	gpio_6	vdds5	PUPD		IO	BQ0054S
V21	158	elcd_data_17	vdds5	PUPD	PD	IO	BQ0054S
R18	159	elcd_data_16	vdds5	PUPD	PD	IO	BQ0054S
T19	160	kbd_r_0	vdds5	PUPD	PU	IO	BQ0055S
U21	161	vss	vdds5			P	
U20	162	vdd	vdds5			P	
P18	163	kbd_r_1	vdds5	PUPD	PU	IO	BQ0055S
R19	164	vpp	vdds5			P	
T20	165	kbd_r_2	vdds5	PUPD	PU	IO	BQ0055S
N14	166	vpp	vdds5			P	
P19	167	kbd_r_3	vdds5	PUPD	PU	IO	BQ0055S
R20	168	kbd_r_4	vdds5	PUPD	PU	IO	BQ0055S
N15	169	vdds5	vdds5			P	
P20	170	kbd_r_5	vdds5	PUPD	PU	IO	BQ0055S
R21	171	vdd	vdds5			P	
N18	172	elcd_data_15	vdds5	PUPD	PD	IO	BQ0054S

8. BGA IC Pin Check

Digital Base Band

N19	173	vss	vdds5			P	
P21	174	vdd	vdds5			P	
N20	175	vss	vdds5			P	
M15	176	elcd_nreset	vdds5	PD	PD	IO	BC1850CSHYPD
N21	177	vdd	vdds5			P	
M18	178	vdds5	vdds5			P	
M20	179	vss	vdds5			P	
M21	181	vdd	vdds5			P	
M19	182	vss	vdds5			P	
M14	183	elcd_ncs0	vdds5		PD	O	OC1850CS
L18	184	vdd	vdds5			P	
L19	185	vss	vdds5			P	
L15	186	elcd_dmc	vdds5			O	OC1850CS
K18	187	vdd	vdds5			P	
K19	188	vss	vdds5			P	
K15	189	elcd_rnw	vdds5			O	OC1850CS
K14	190	elcd_te	vdds5	PUPD	PD	IO	BQ0057S
K21	191	elcd_data_14	vdds5	PUPD	PD	IO	BQ0054S
K20	192	vdds5	vdds5			P	
J19	193	elcd_data_13	vdds5	PUPD	PD	IO	BQ0054S
J21	194	elcd_data_12	vdds5	PUPD	PD	IO	BQ0054S
J18	195	elcd_data_11	vdds5	PUPD	PD	IO	BQ0054S
J20	196	elcd_data_10	vdds5	PUPD	PD	IO	BQ0054S
H21	197	elcd_data_9	vdds5	PUPD	PD	IO	BQ0054S
H19	198	elcd_data_8	vdds5	PUPD	PD	IO	BQ0054S
H20	199	elcd_data_7	vdds5	PUPD	PD	IO	BQ0054S
G21	200	vss	vdds5			P	
J15	201	gpio_2	vdds5	PD		IO	BC1850CSHYPD
J14	202	serialrf_rf_cs	vdds5	PU	PU	IO	BC1850CSHYPU
G20	203	vdd	vdds5			P	
G18	204	elcd_data_6	vdds5	PUPD	PD	IO	BQ0054S
H18	205	elcd_data_5	vdds5	PUPD	PD	IO	BQ0054S
F20	206	elcd_data_4	vdds5	PUPD	PD	IO	BQ0054S
F19	207	vdds5	vdds5			P	
G18	208	elcd_data_3	vdds5	PUPD	PD	IO	BQ0054S
E20	209	vdd	vdds5			P	
E21	210	vss	vdds5			P	
E19	211	elcd_data_2	vdds5	PUPD	PD	IO	BQ0054S
F18	212	elcd_data_1	vdds5	PUPD	PD	IO	BQ0054S
D21	213	elcd_data_0	vdds5	PUPD	PD	IO	BQ0054S
D20	214	elcd_esub	vdds5			O	OQ0028S
E18	215	serialrf_rx_clk	vdds5	PD	PD	IO	BC1850CSHYPD
C21	216	serialrf_data	vdds5	PD	PD	IO	BC1850CSHYPD
D19	217	serialrf_rx_data	vdds5	PD	PD	IO	BC1850CSHYPD
C20	218	serialrf_enable	vdds5	PD	PD	IO	BC1850CSHYPD
B21	219	kbd_c_4	vdds5			O	OC1850CS
D18	220	serialrf_rf_clk	vdds5	PD		IO	BC1850CSHYPD

8. BGA IC Pin Check

Digital Base Band

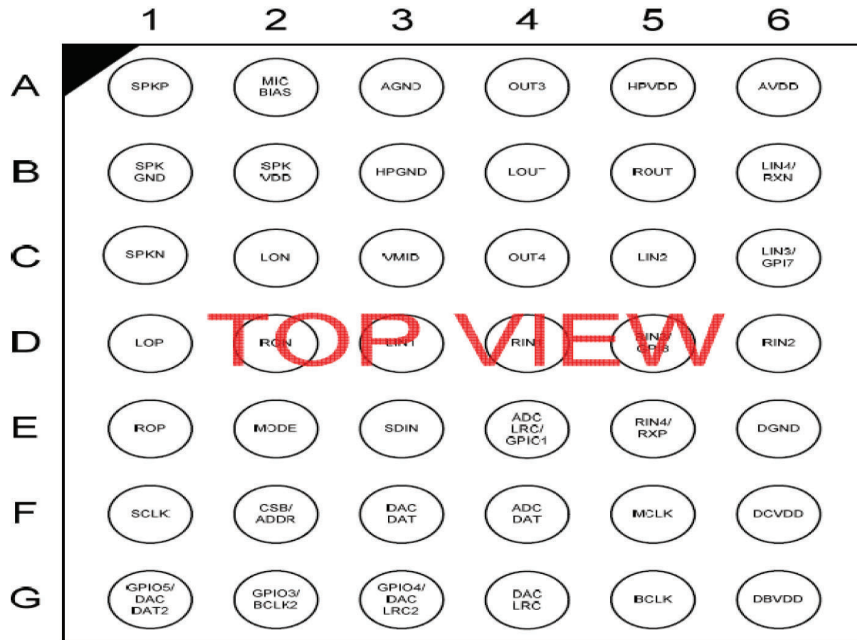
C19	221	serialrf_rf_data	vdds5	PD	PD	IO	BC1850CSHYPD
B20	223	vdds5	vdds5			P	
D17	224	serialrf_rx_cs	vdds5	PD	PD	IO	BC1850CSHYPD
C18	225	serialrf_tx_clk	vdds5	PD		IO	BC1850CSHYPD
A20	226	vss	vdds5			P	
B19	227	vdd	vdds5			P	
D16	228	serialrf_enr	vdds5	PD		IO	BC1850CSHYPD
A19	229	serialrf_sysclk	vdds5	PUPD	PD	IO	BQ0057S
C17	230	serialrf_tx_start	vdds5			O	OC1850CS
B18	231	serialrf_rxen	vdds5	PD		IO	BC1850CSHYPD
A18	232	i2c1_sda	vdds5			IO	BQ0045S
D15	233	vdds6	vdds6			P	
C16	234	ulpdr_on_noff	vdds6			I	IQ0041S
A17	235	vss	vdds7			P	
B17	236	vdd	vdds7			P	
D14	237	ulpdr_sys_clk_out	vdds7			O	OC1850CS
C15	238	i2c2_scl	vdds7			IO	BQ0045S
B16	239	kbd_c_2	vdds7			O	OC1850CS
H13	240	kbd_c_0	vdds7			O	OC1850CS
C14	241	mcsil_dout	vdds7			O	OC1850CS
B15	242	uart3_rx	vdds7	PD	PD	IO	BC1850CSHYPD
G13	243	gpio_47	vdds7	PU	PU	IO	BC1850CSHYPU
B14	244	mcsil_sync	vdds7	PUPD	PD	IO	BQ0057S
A15	245	mcsil_bclk	vdds7	PUPD	PD	IO	BQ0057S
D13	246	mcsil_dim	vdds7	PD	PD	IO	BC1850CSHYPD
C13	247	vdds7	vdds7			P	
A14	248	uart3_tx	vdds7	PUPD		IO	BQ0057S
B13	249	tsp_act2	vdds7			O	OC1850CS
G12	250	gpio_32	vdds7	PD	PD	IO	BC1850CSHYPD
A13	251	uart3_rts	vdds7	PD		IO	BC1850CSHYPD
D12	252	uart3_cts	vdds7	PUPD	PD	IO	BQ0057S
B12	253	gpio_46	vdds7	PD	PD	IO	BC1850CSHYPD
A12	255	cam_d_6	vdds7	PUPD	PD	IO	BQ0054S
C12	256	cam_d_7	vdds7	PUPD	PD	IO	BQ0054S
H12	257	misc_ext_irq	vdds7	PUPD	PU	IO	BQ0062S
D11	258	cam_d_3	vdds7			IO	BQ0031S.2
C11	259	cam_d_2	vdds7			IO	BQ0031S.1
G11	260	kbd_c_5	vdds7			O	OC1850CS
D10	261	cam_d_1	vdds7			IO	BQ0031S.2
C10	262	cam_d_0	vdds7			IO	BQ0031S.1
G10	263	ulpdr_wakeup_int	vdds7			O	OC1850CS
H10	264	gpio_17	vdds7			IO	BC1850CSHY
A10	265	cam_xclk	vdds7	PUPD	PD	IO	BQ0054S
B10	266	vss	vdds7			P	
C9	267	vdds7	vdds7			P	
A9	268	vdd	vdds7			P	
D9	269	kbd_c_1	vdds7			O	OC1850CS

Digital Base Band

B9	270	cam_d_5	vdds7	PUPD	PD	IO	BQ0054S
A8	271	cam_lclk	vdds7	PUPD	PD	IO	BQ0054S
C8	272	cam_d_4	vdds7	PUPD	PD	IO	BQ0054S
B8	273	cam_hs	vdds7	PUPD	PD	IO	BQ0054S
A7	274	cam_vs	vdds7	PUPD	PD	IO	BQ0054S
G9	275	gpio_12	vdds7	PU	PU	IO	BC1850CSHYPU
H9	276	test_nrst	vdds7	PUPD	PD	I	BQ0066S
B7	277	mcbssp1_clkx	vdds7	PD	PD	IO	BC1850CSHYPD
C7	278	mcbssp1_frx	vdds7	PD	PD	IO	BC1850CSHYPD
D8	279	mcbssp1_din	vdds7	PD	PD	IO	BC1850CSHYPD
B6	280	mcbssp1_dout	vdds7			O	OC1850CS
C6	281	vdds7	vdds7			P	
D7	282	mcsi2_dout	vdds7			O	OC1850CS
B5	283	mcsi2_din	vdds7	PD	PD	IO	BC1850CSHYPD
A5	284	mcsi2_sync	vdds7	PD	PD	IO	BC1850CSHYPD
C5	285	mcsi2_bclk	vdds7	PD	PD	IO	BC1850CSHYPD
D6	286	kbd_c_3	vdds7			O	OC1850CS
A4	287	test_tms	vdds7	PUPD	PD	I	BQ0066S
B4	288	test_rtck	vdds7			O	OQ0028S
D5	289	test_tck	vdds7	PUPD	PD	I	BQ0066S
A3	290	test_tdi	vdds7	PUPD	PD	I	BQ0066S
C4	291	test_tdo	vdds7			O	OQ0028S
B3	292	test_nemm0	vdds7	PUPD	PU	IO	BQ0062S
A2	293	vdd	vdds7			P	
D4	294	vss	vdds7			P	
C3	295	test_nemul	vdds7	PUPD	PU	IO	BQ0062S

8. BGA IC Pin Check

Codec (WM8990)



PIN DESCRIPTION

PIN NO	NAME	TYPE	DESCRIPTION
A2	MICBIAS	Analogue Output	Microphone bias
D3	LIN1	Analogue Input	Left channel single-ended MIC input / Left channel negative differential MIC input
C5	LIN2	Analogue Input	Left channel line input / Left channel positive differential MIC input
C6	LIN3 / GPI7	Analogue Input / Digital Input	Left channel line input / Left channel negative differential MIC input / Accessory or button detect input pin
B6	LIN4 / RXN	Analogue Input	Left channel line input / Left channel positive differential MIC input / Mono differential negative input (Rx voice -)
D4	RIN1	Analogue Input	Right channel single-ended MIC input / Right channel negative differential MIC input
D6	RIN2	Analogue Input	Right channel line input / Right channel positive differential MIC input
D5	RIN3 / GPI8	Analogue Input / Digital Input	Right channel line input / Right channel negative differential MIC input / Accessory or button detect input pin
E5	RIN4 / RXP	Analogue Input	Left channel line input / Left channel positive differential MIC input / Mono differential positive input (Rx voice +)
F6	DCVDD	Supply	Digital core supply
E6	DGND	Supply	Digital ground (Return path for both DCVDD and DBVDD)
G6	DBVDD	Supply	Digital buffer (I/O) supply
A6	AVDD	Supply	Analogue supply
A3	AGND	Supply	Analogue ground (Return path for AVDD)
A5	HPVDD	Supply	Headphone supply
B3	HPGND	Supply	Headphone ground (Return path for HPVDD)
B2	SPKVDD	Supply	Supply for speaker driver
B1	SPKGND	Supply	Ground for speaker driver (Return path from SPKVDD)

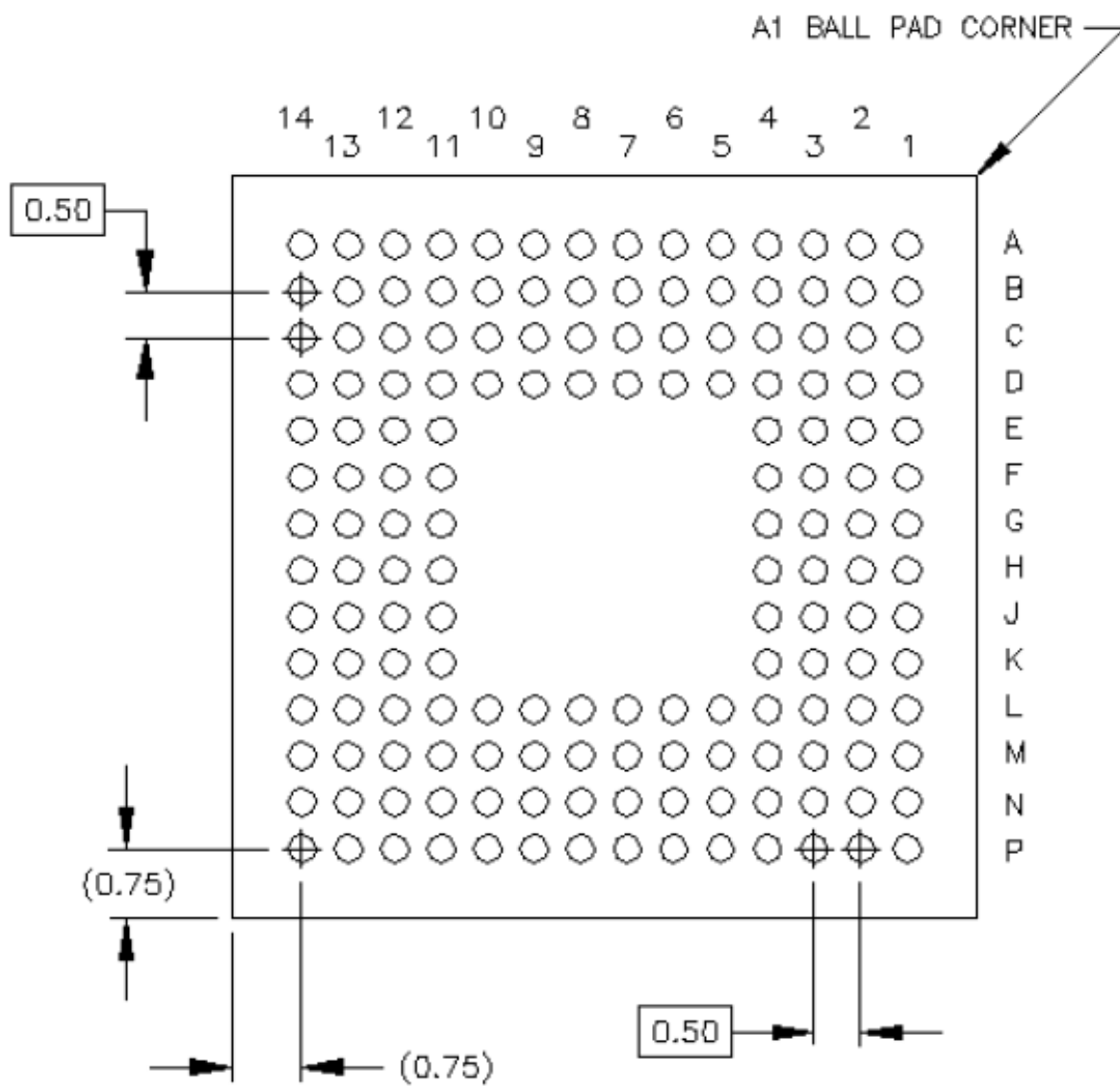
Codec (WM8990)

F5	MCLK	Digital Input	Master clock
G5	BCLK	Digital Input / Output	Audio interface bit clock
G4	DACLRC	Digital Input / Output	Audio interface DAC left / right clock
F3	DACDAT	Digital Input	DAC digital audio data
E4	ADCLRC / GPIO1	Digital Input / Output	Audio interface ADC left / right clock / GPIO1 pin
F4	ADCDAT	Digital Output	ADC digital audio data
E2	MODE	Digital Input	Selects 2-wire or 3/4 -wire control
F2	CSB / ADDR	Digital Input	3/4 -wire chip select or 2-wire address select
F1	SCLK	Digital Input	Control interface clock input
E3	SDIN	Digital Input / Output	Control interface data input / 2-wire acknowledge output
A1	SPKP	Analogue Output	Speaker positive output
C1	SPKN	Analogue Output	Speaker negative output
B4	LOUT	Analogue Output	Left headphone output
B5	ROUT	Analogue Output	Right headphone output
A4	OUT3	Analogue Output	Inverted left headphone output / Mono inverted output
C4	OUT4	Analogue Output	Inverted right headphone output / Mono non-inverted output
C2	LON	Analogue Output	Negative left line output / Positive right line output
D1	LOP	Analogue Output	Positive left line output
D2	RON	Analogue Output	Negative right line output / Positive left line output

PIN NO	NAME	TYPE	DESCRIPTION
E1	ROP	Analogue Output	Postive right line output
C3	VMID	Analogue Output	Midrail voltage decoupling capacitor
G2	GPIO3 / BCLK2	Digital Input / Output	Alternative BCLK / GPIO pin
G3	GPIO4 / DACLRC2	Digital Input / Output	Alternative DACLRC / GPIO pin
G1	GPIO5 / DACDAT2	Digital Input / Output	Alternative DACDAT / GPIO pin

8. BGA IC Pin Check

Multi Media Chip (TCC7402)



Multi Media Chip (TCC7402)



TOP VIEW

	1	2	3	4	5	6	7
A	GP_E1	GP_B4	GP_B3	GP_B1	TDO	TMS	GP_A26
B	GP_E0	GP_B9	GP_B6	RTCK	nTRST	VSSQ_MEM	GP_A24
C	GP_B5	VDD_IO_B	GP_B7	VSS_IO_B	nRESET	TEST	VSS_CO_0
D	GP_B10	GP_B2	GP_B8	TCK	VDD_CO_0	GP_A15	GP_A23
E	GP_B11	TDI	GP_B0	GP_A27			
F	GP_E3	GP_E4	GP_A13	GP_A21			
G	GP_E2	VSS_IO_E	GP_A25	GP_A9			
H	GP_E7	GP_E5	GP_A12	GP_A10			
J	USB_DP	VSSA_PLL	VDD_IO_E	VDDD_RTC0			
K	USB_DM	VSSA_USB	USB_REXT	XTIN			
L	GP_C6	VDDA_USB	XTOUT	VDDD_RTC1	FILTER0	GP_F7	GP_C1
M	VDD_IO_C	UTM_XI	VDDD_USB	VSSD_USB	GP_C4	GP_F4	GP_C3
N	VSS_IO_C	GP_C22	GP_C21	GP_C7	GP_F0	GP_C2	GP_C0
P	GP_C16	GP_C17	GP_C18	GP_C19	GP_C20	GP_F5	GP_F11

8. BGA IC Pin Check

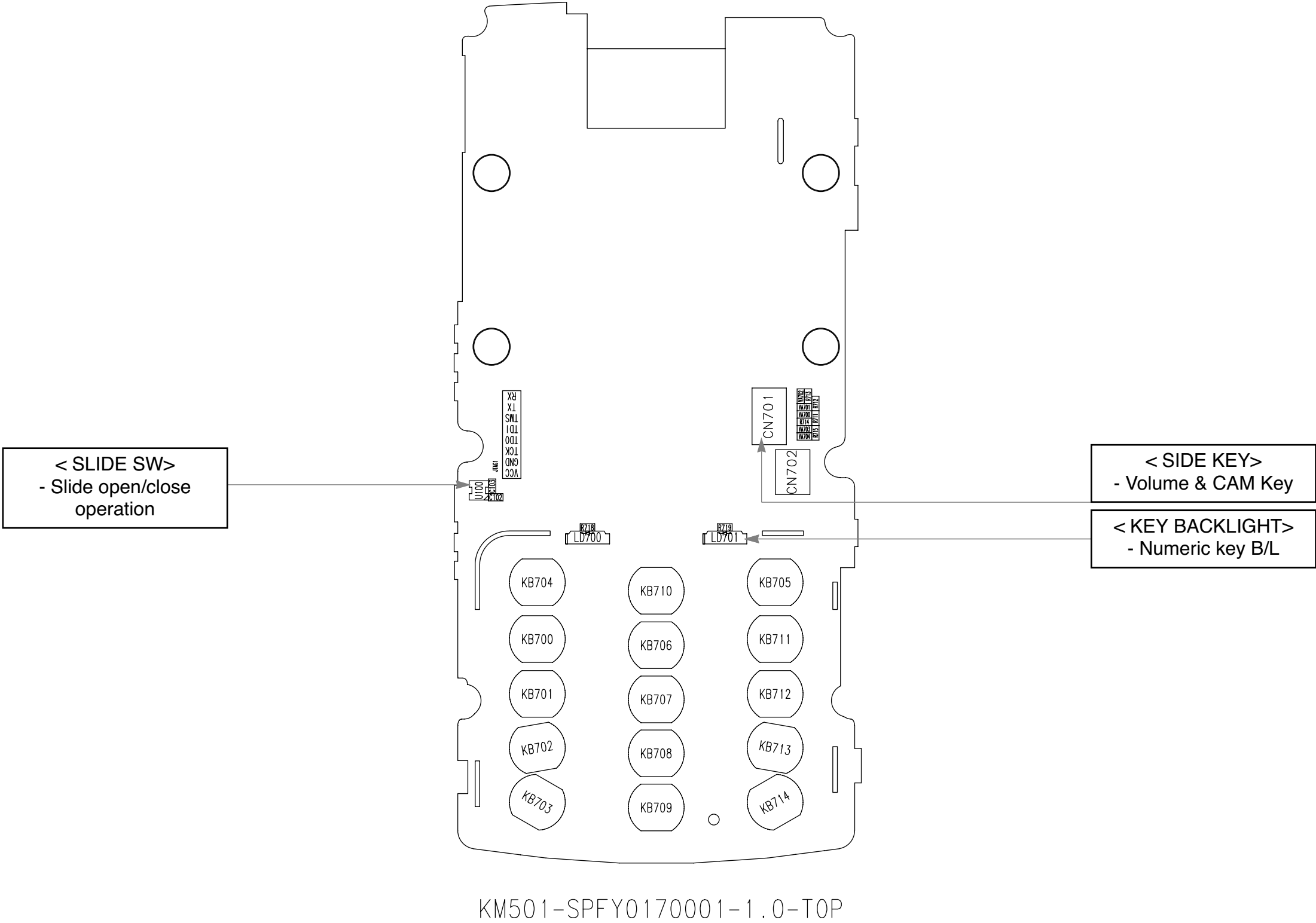
Multi Media Chip (TCC7402)

TOP VIEW

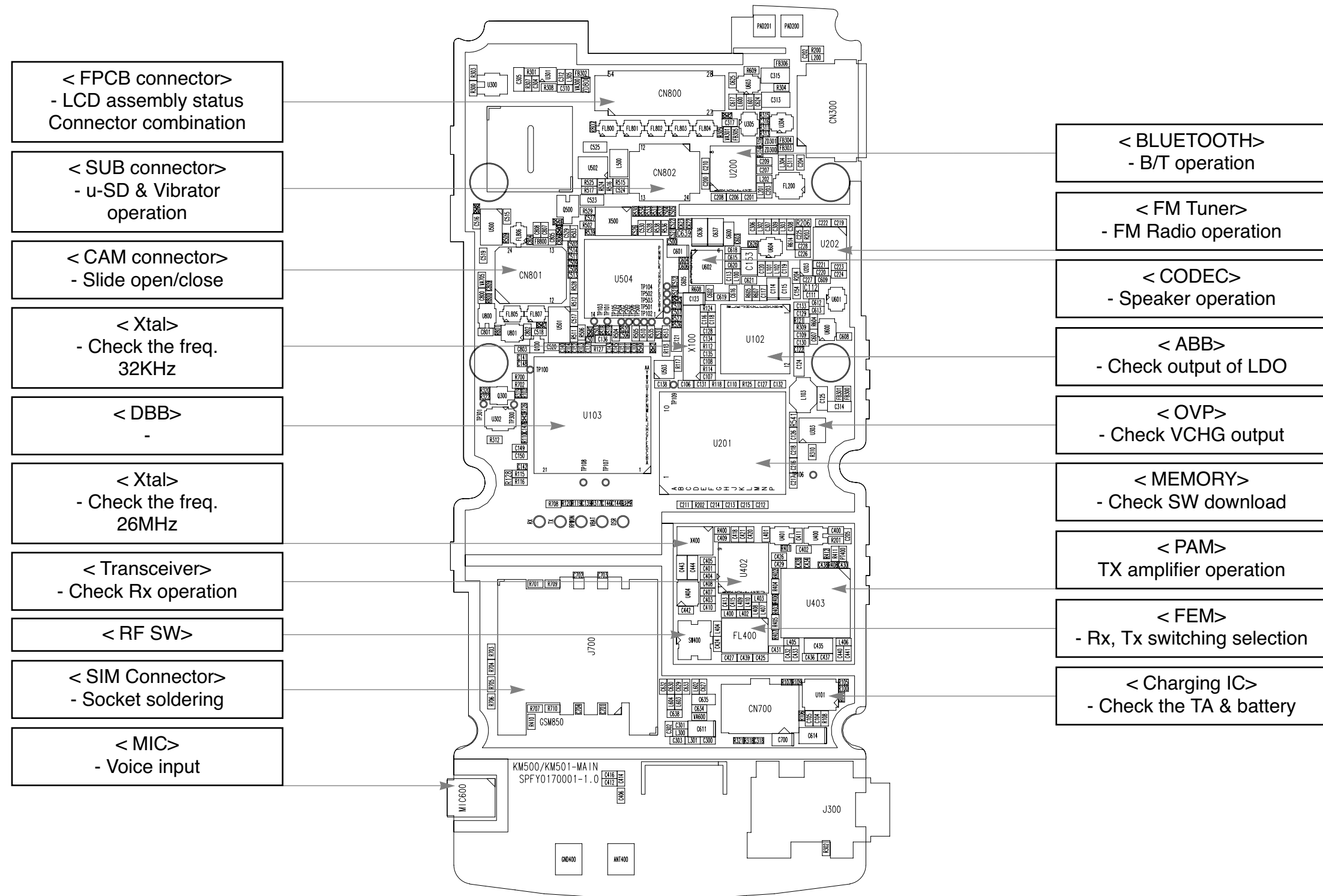


8	9	10	11	12	13	14	
GP_A22	GP_A20	GP_A11	GP_A7	GP_A5	BMSEL	GIO_EN	A
VDD_IO_A	GP_A19	GP_A14	VDDQ_MEM	GP_G22	BPEN	GP_A0	B
GP_A18	VSS_IO_A	GP_G18	GP_A6	GP_A2	GP_G23	GP_A1	C
GP_A17	GP_A16	GP_A8	GP_A4	GP_A3	GP_G21	GP_G19	D
			GP_G20	GP_G14	GP_G15	GP_G13	E
			GP_G12	GP_G17	GP_G11	GP_G10	F
			GP_G1	VDD_IO_G	GP_G8	GP_G6	G
			GP_G0	GP_G5	VSS_IO_G	GP_G9	H
			GP_G16	VSS_CO_2	GP_G3	GP_G4	J
			GP_E6	VDD_IO_X1	GP_G2	VDD_CO_2	K
VDDAD_PLL	GP_F8	FILTER1	VSSD_PLL	GP_F10	VSS_IO_X1	GP_G7	L
GP_F1	VSS_IO_F	UTM_X0	GP_F6	VSS_CO_1	GP_F15	GP_F12	M
GP_C5	GP_C23	SDR_CKE	GP_F3	VDD_IO_F	VDD_CO_1	GP_F13	N
GP_F2	GP_F9	GP_F14	VSS_IO_X0	VDD_IO_X0	VSS_MEM	VDD_MEM	P

9. PCB LAYOUT

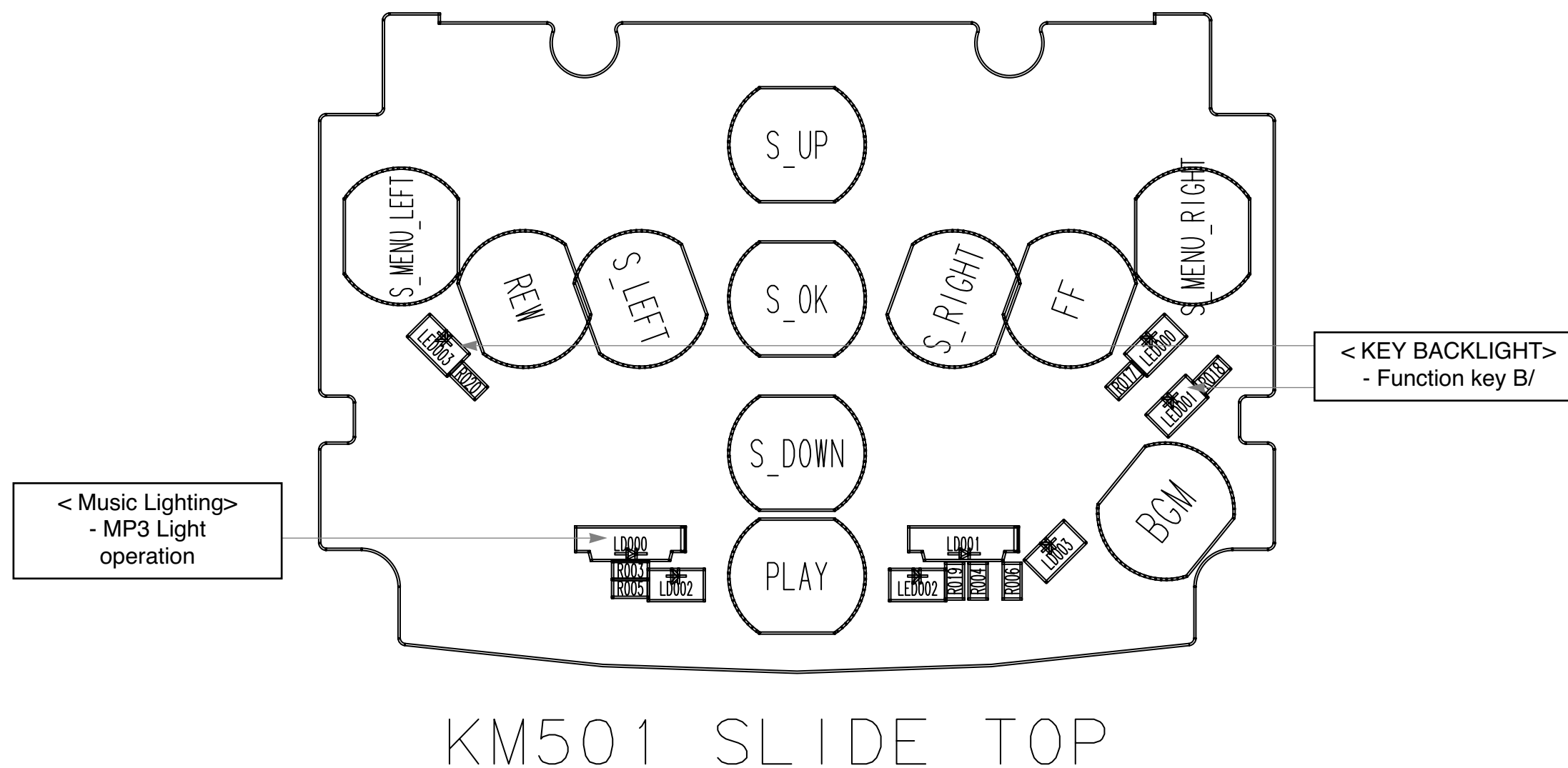


9. PCB LAYOUT

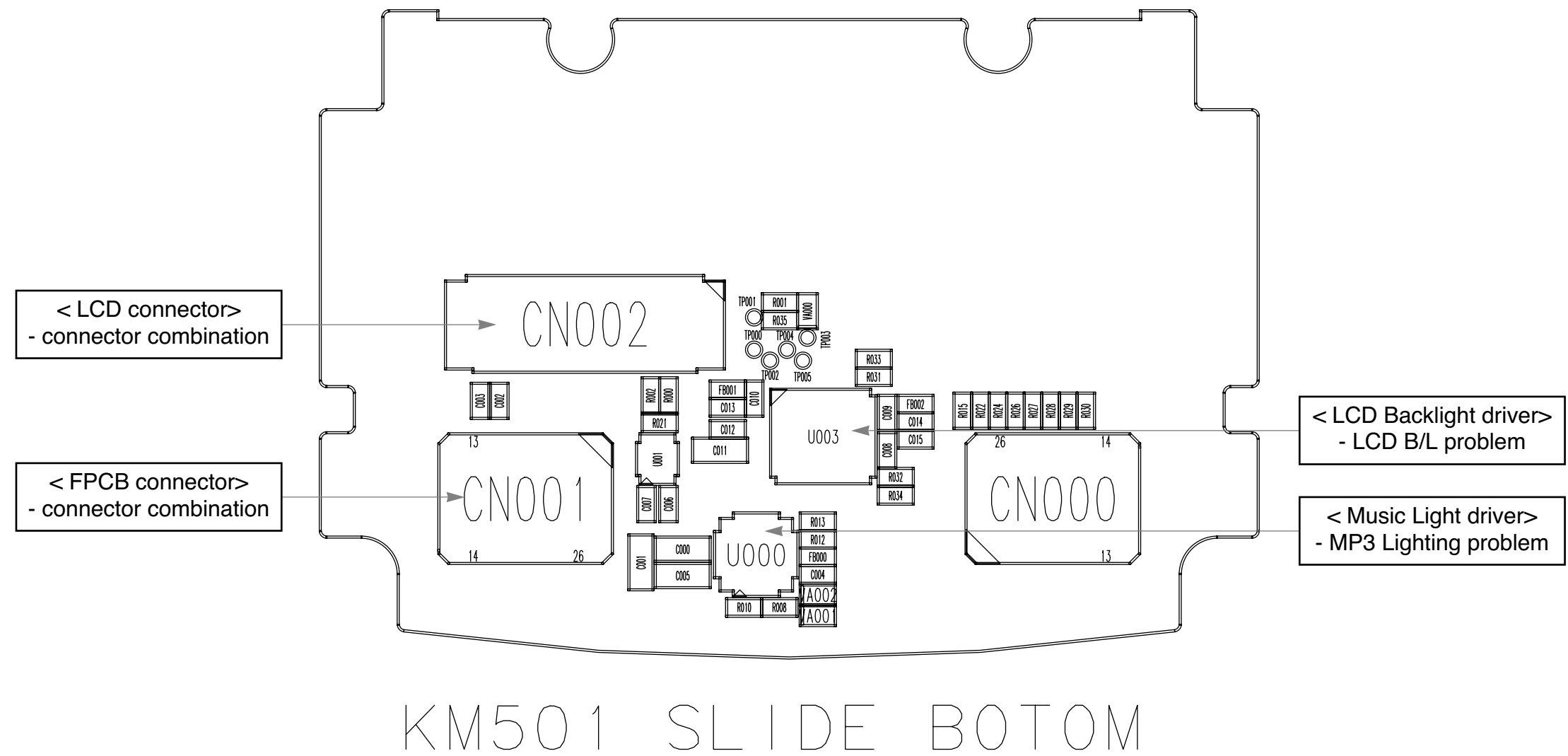


KM501-SPFY0170001-1.0-BTM

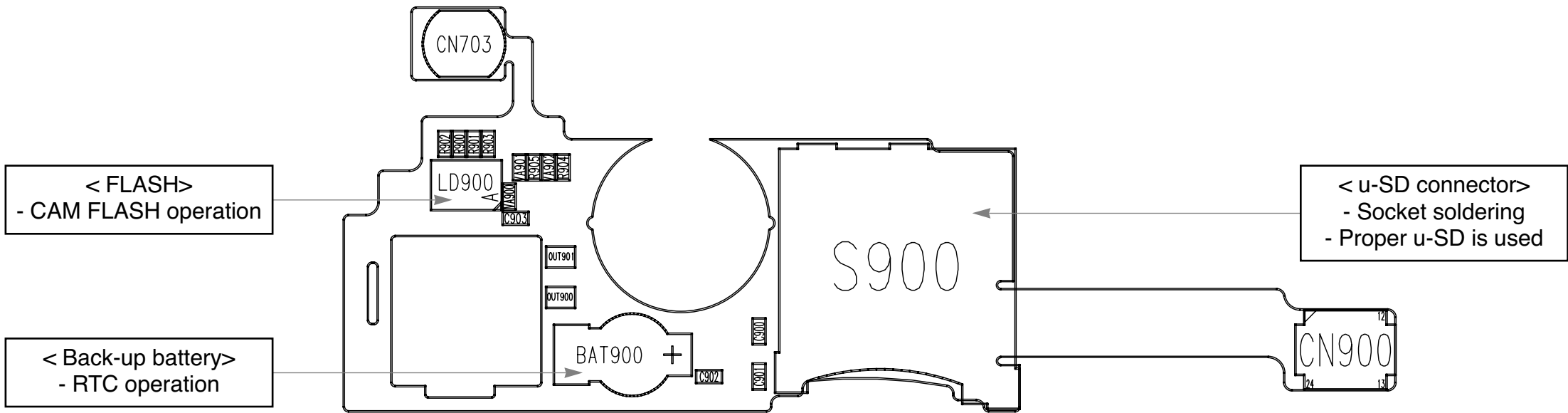
9. PCB LAYOUT



9. PCB LAYOUT

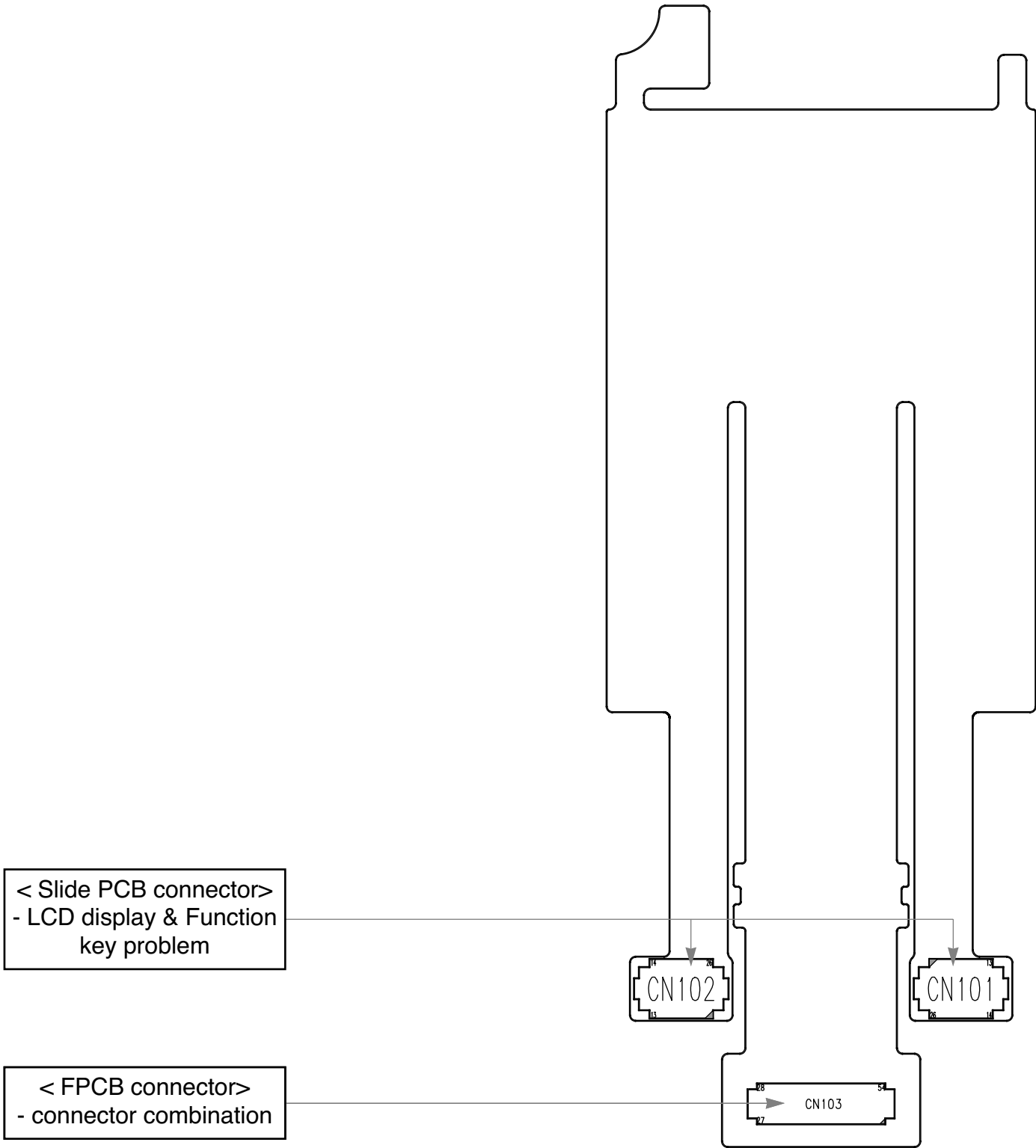


9. PCB LAYOUT



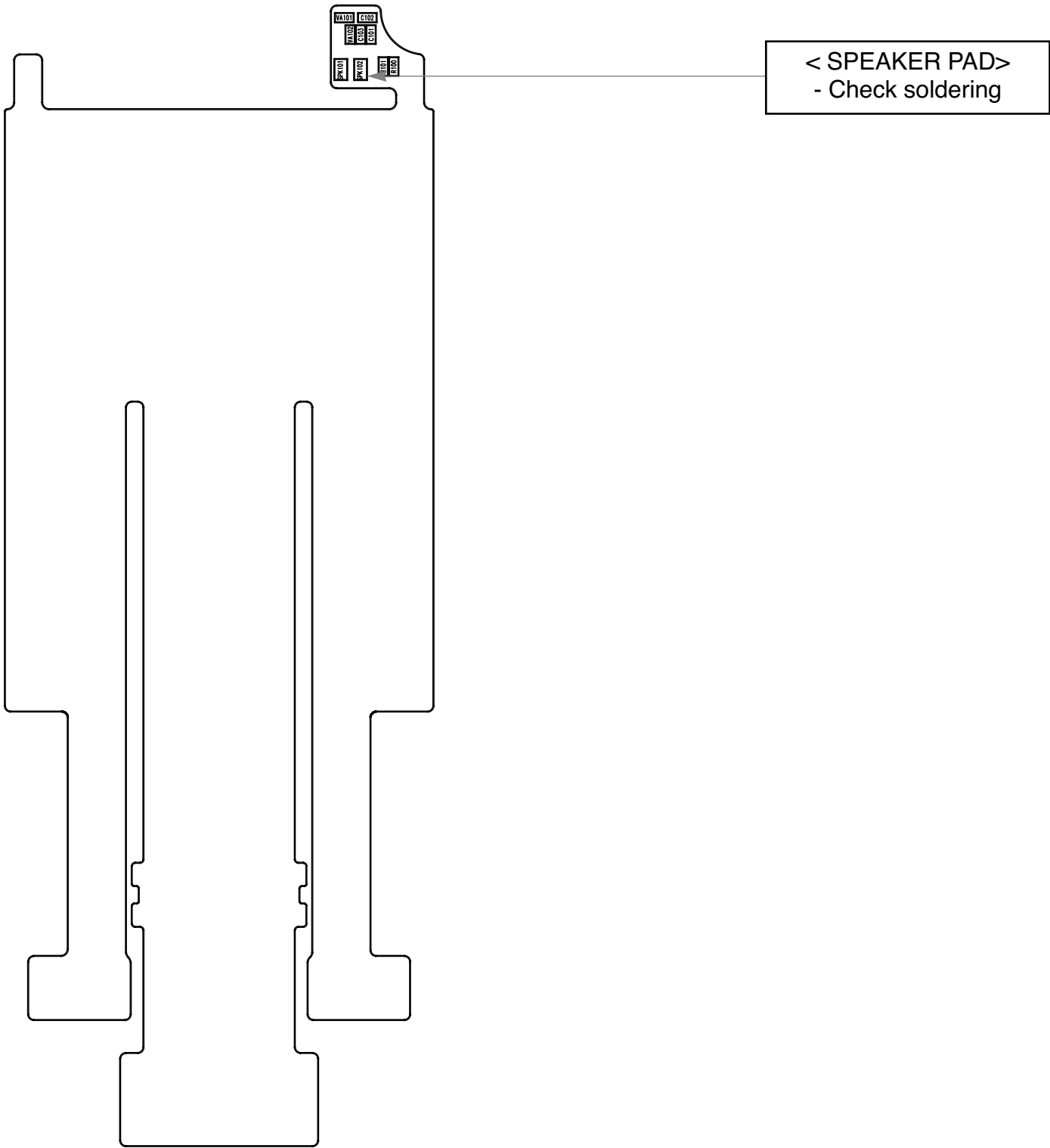
KM500/501 SUB-FPCB SPCY0124801-1.0 BOTTOM

9. PCB LAYOUT



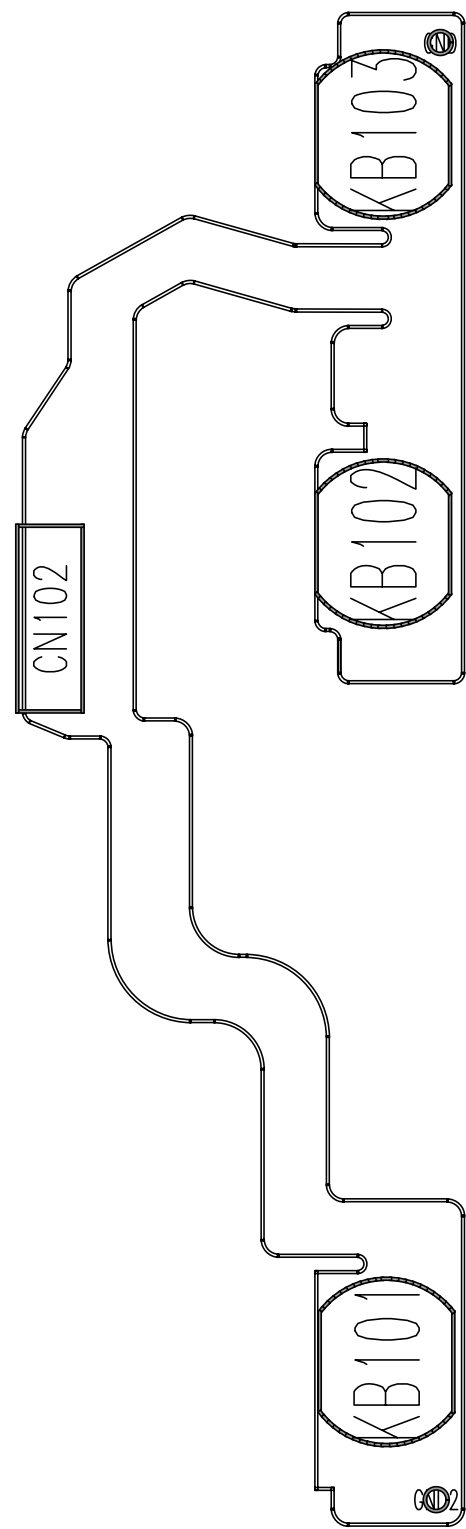
KM501-F-LCD-1.0-TOP

9. PCB LAYOUT



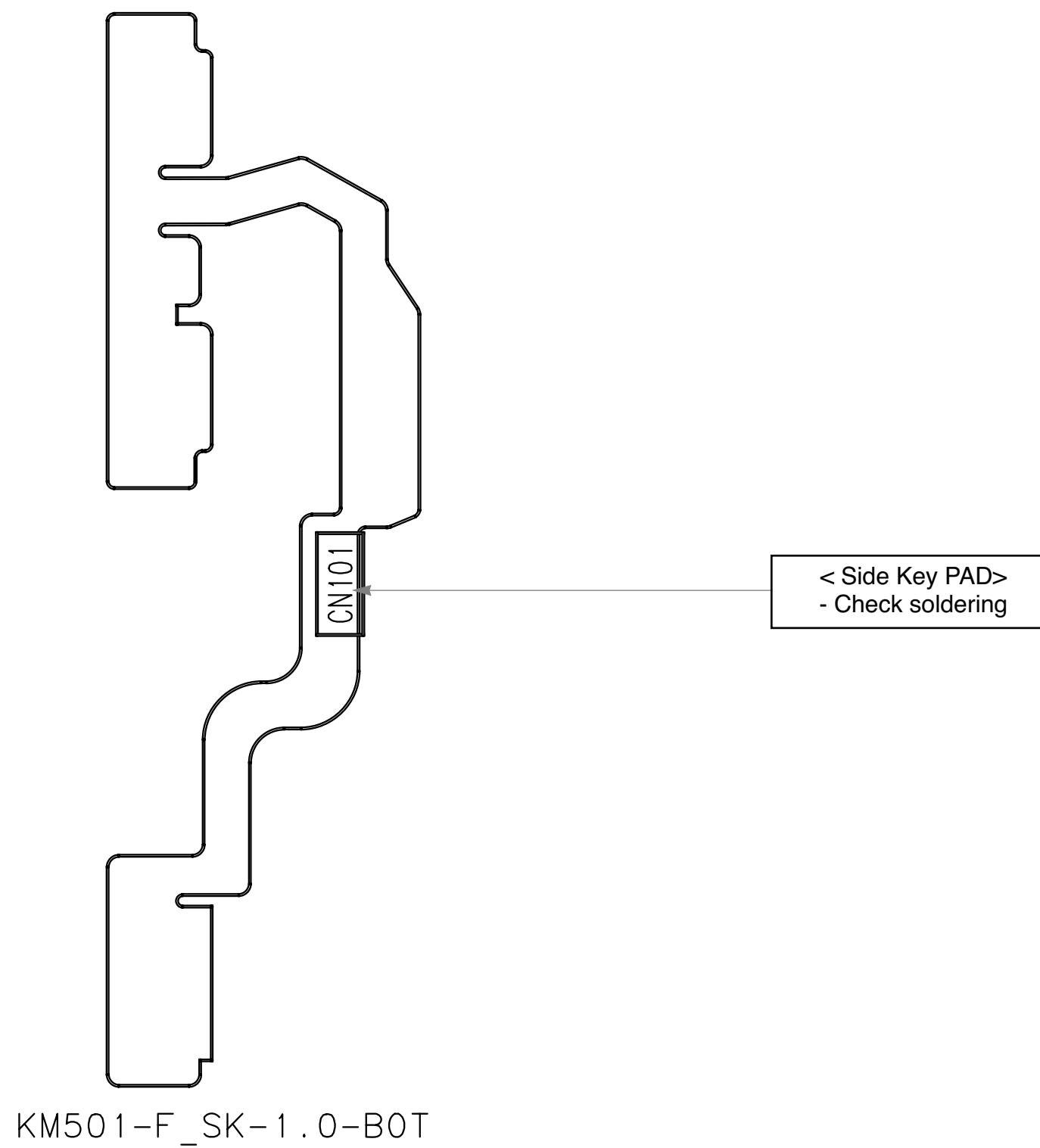
KM501-F-LCD-1.0-BTM

9. PCB LAYOUT



KM501-F_SK-1.0-TOP

9. PCB LAYOUT

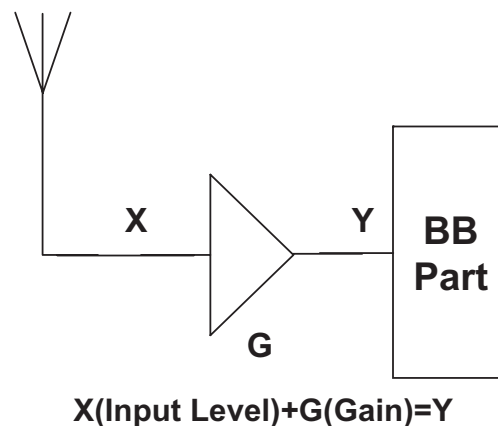


10. Calibration

10.1 What's the Rx Calibration?

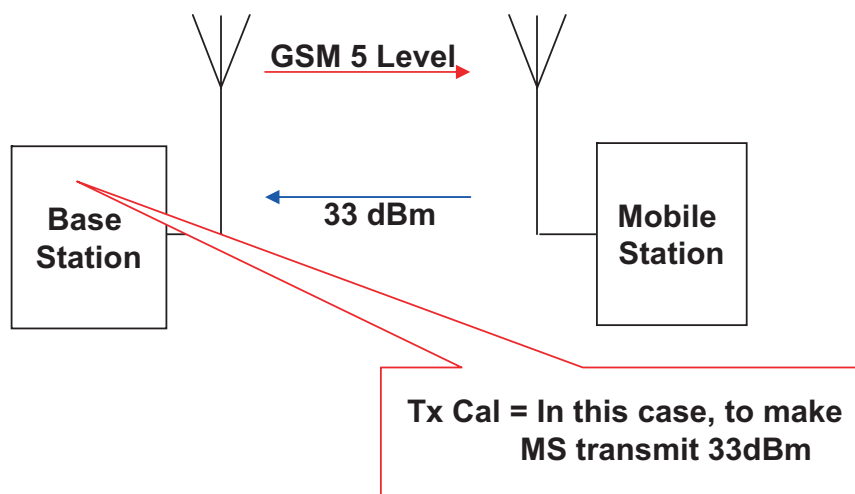
10.1.1 Find proper AGC Gain to make the same Rx Power fed into the Base Band Part regardless of Antenna Input Level

10.1.2 Can make report correct RSSI level



10.2 What's the Tx Calibration?

10.2.1 To make Tx Power Level transmitted properly following the information of Base Station



10. Calibration

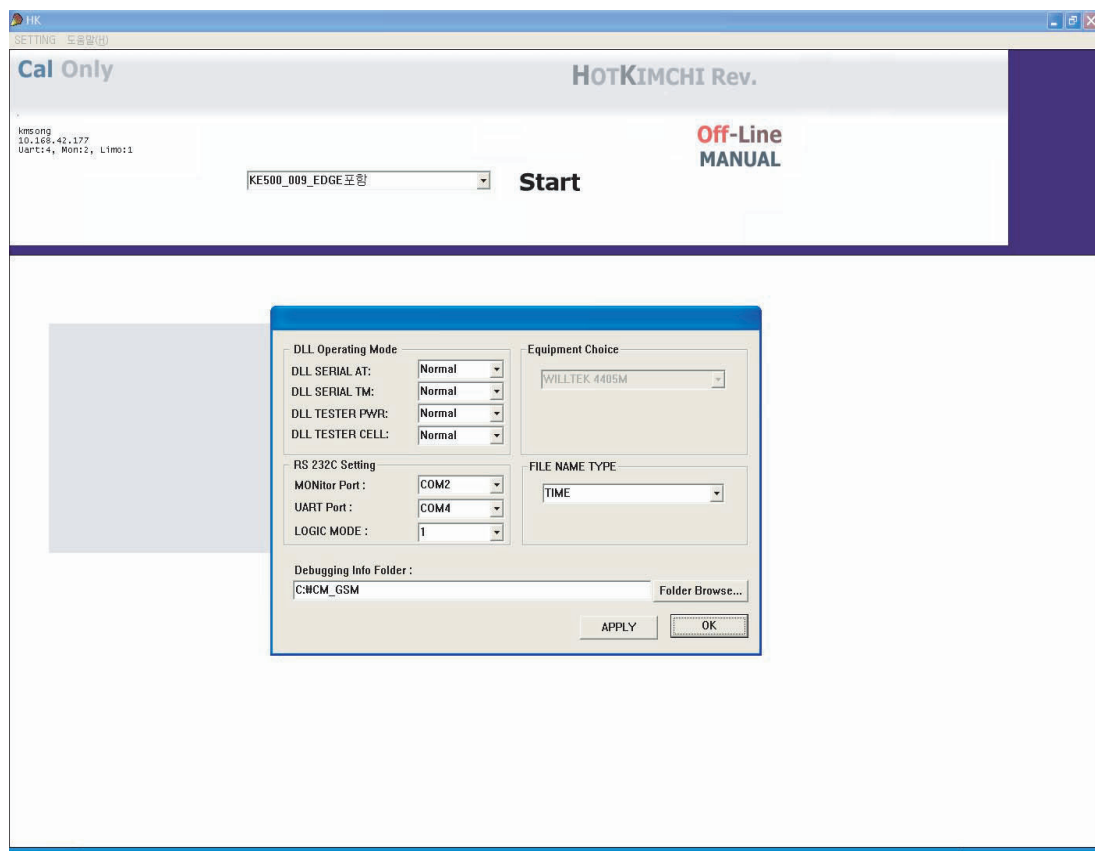
10.3 Calibration program - HOT_KIMCHI

10.3.1 Calibration Program (HOT_KIMCHI)

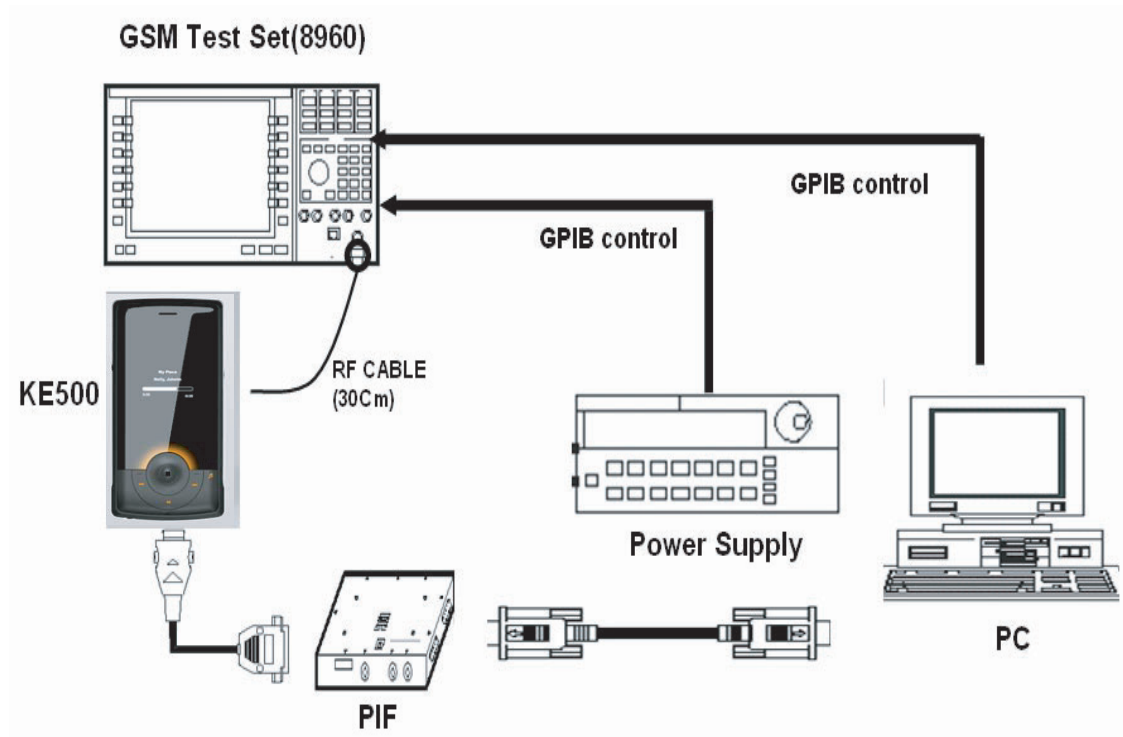
- Under windows 2k or XP
- PIF JIG Support Agilent 8960 Test Set

10.3.2 Required Equipments

- Test PC with PCMCIA slot
- GPIB card
- E5515C(Agilent 8960 series)
- Power supply



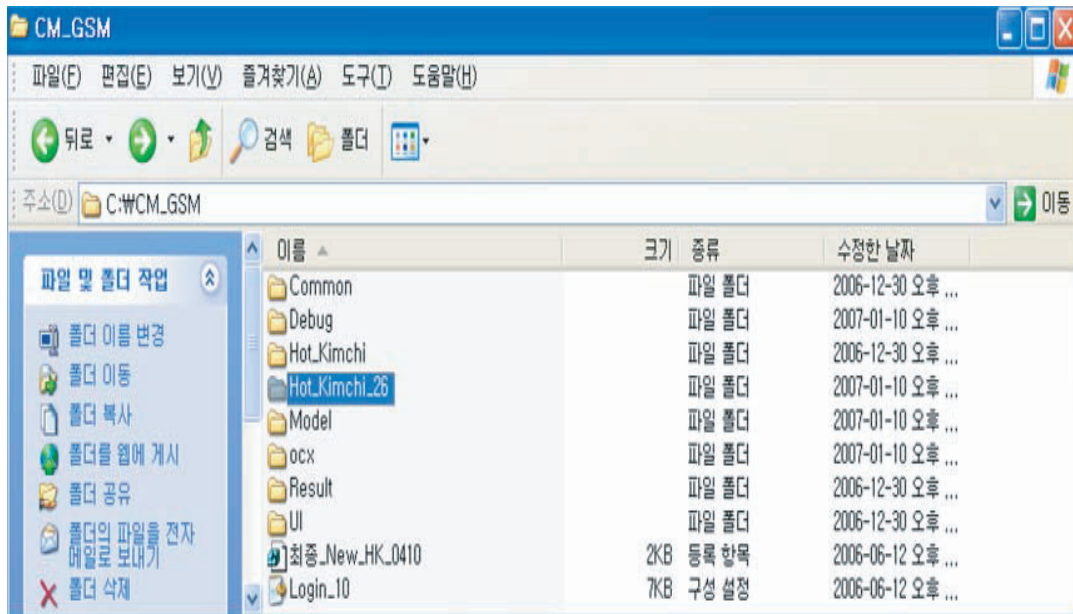
10.3.3 Calibration Equipment Setup



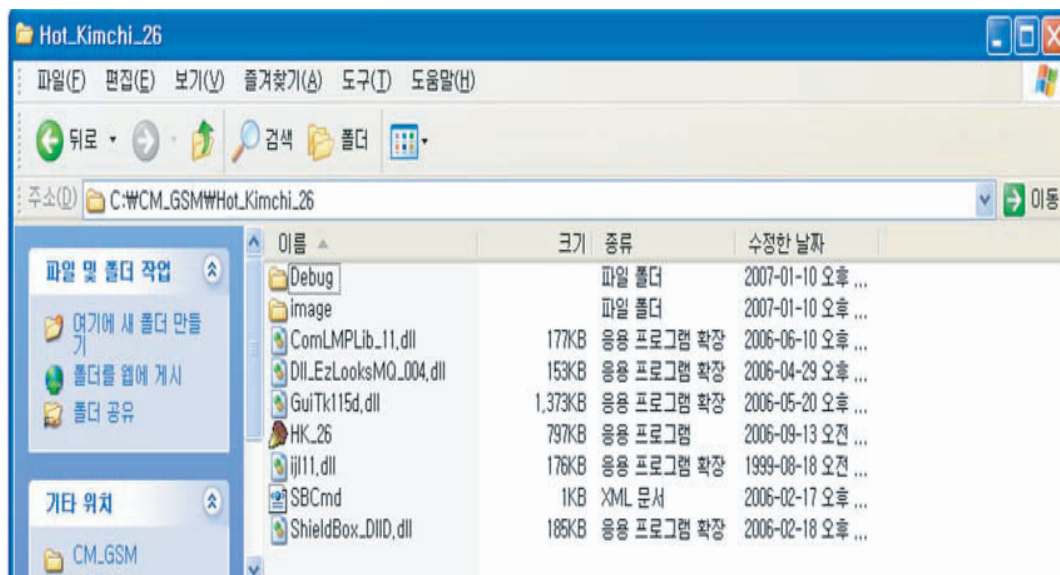
10. Calibration

10.3.4 Calibration program - HOT_KIMCHI

10.3.4.1 Open the HOT_KIMCHI folder

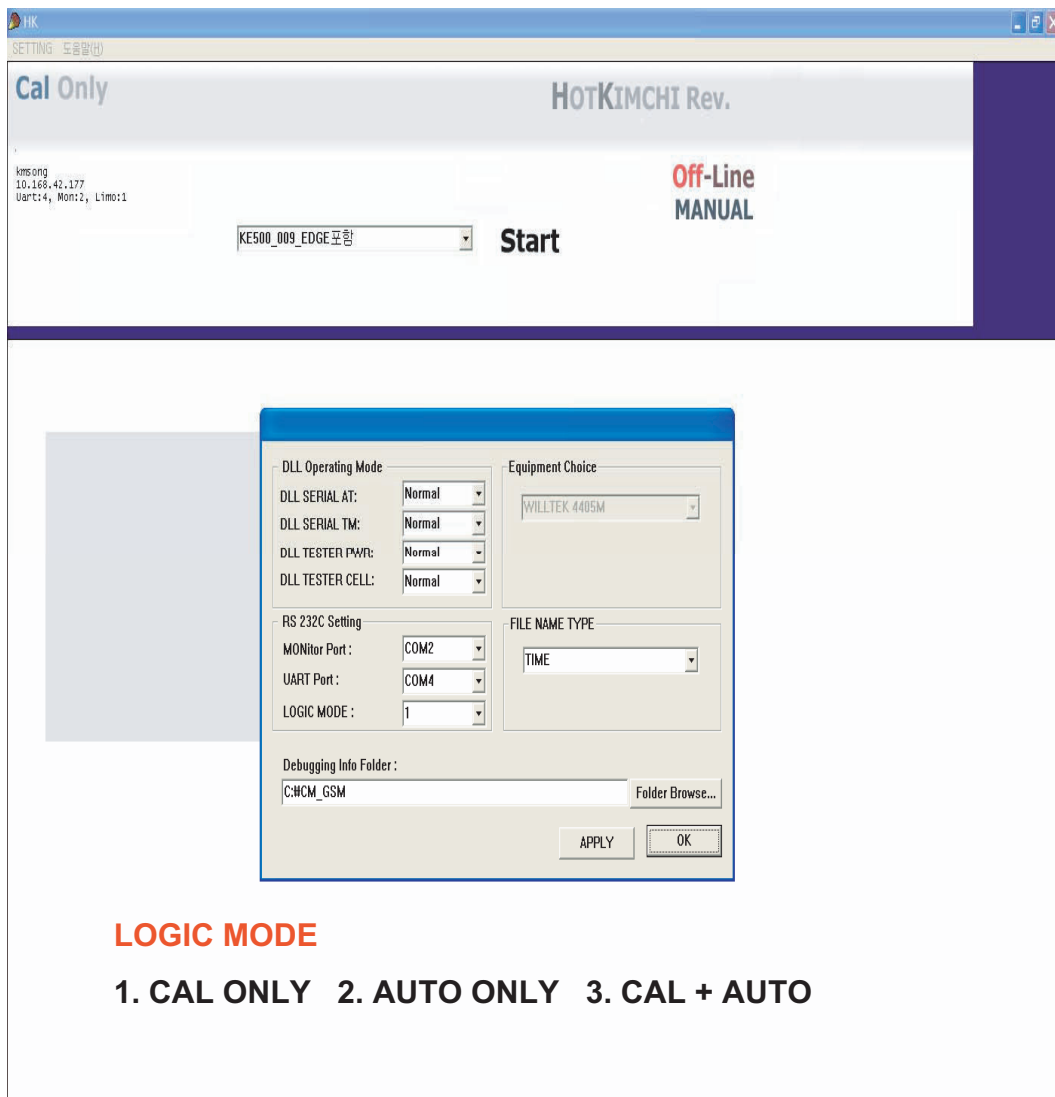


10.3.4.2 Execute Program (HOT_KIMCHI)



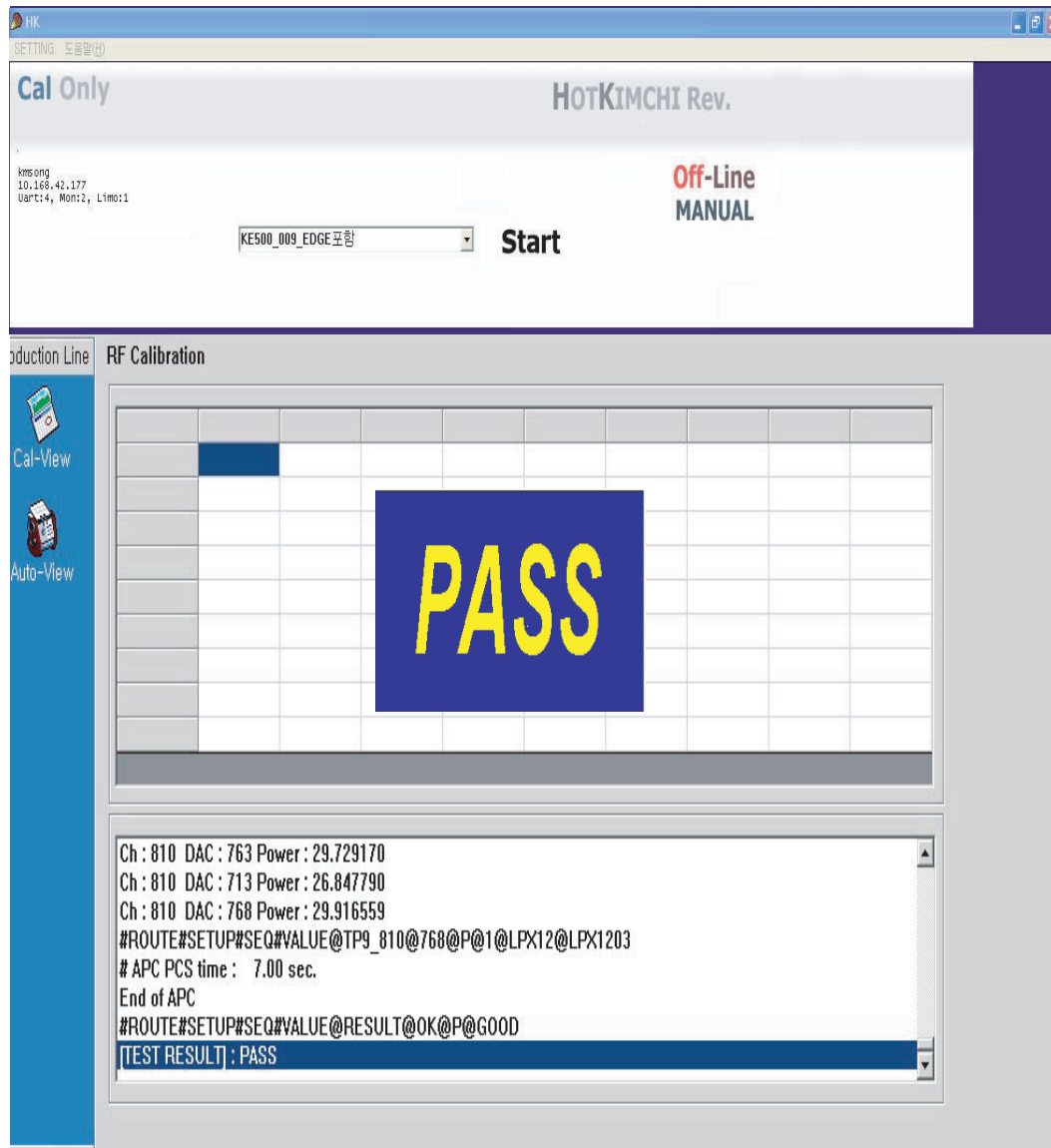
10.3.4.3 Set the “SETTING” menu

10.3.4.4 Click the “START”



10. Calibration

10.3.4.5 Check “[TEST RESULT]: PASS”



11. Engineering Mode

- Enter Engineering Mode : 2945##

1. All Auto Test : all function of Handset Auto Test

2. Baseband : UART, LCD, Camera, Sound, Serial Port, Battery, FMRadio, BT Test

1) LED

i) Backlight

a. Main LCD On/Off

b. Keypad On/Off

2) LCD

i) LCD auto

a. LCD auto main

ii) LCD color

a. Main LCD

iii) Main LCD RGB

a. Red

b. Green

c. Blue

d. White

e. Black

f. RGB Value

iv) Display test

3) Camera

i) Main LCD Preview

4) Alert

i) Vibrator

ii) Ring

iii) Effect sound

iv) iMelody sound

v) EMS sound

vi) Volume

vii) Volume Gain Control

5) Serial Port

i) Modem

a. FAX & DATA

b. PANEL

c. L1 TRACE

d. DUMMY

ii) Irda

a. PANEL

b. L1 TRACE L

c. HandsFree

d. Irda

e. DUMMY

6) Battery Info1

11. Engineering Mode

7) Audio Gain

i) Receiver

a. Voice

1. Uplink / Amp
2. Downlink
3. Sidetone

b. Keytone

1. Uplink / Amp
2. Downlink
3. Sidetone

c. Stream

1. Uplink / Amp
2. Stereo Left
3. Stereo Right

ii) EarMic

a. Voice

1. Uplink / Amp
2. Downlink
3. Sidetone

b. Keytone

1. Uplink / Amp
2. Downlink
3. Sidetone

c. Stream

1. Uplink / Amp
2. Stereo Left
3. Stereo Right

iii) Loud Speaker

a. Voice

1. Uplink / Amp
2. Downlink
3. Sidetone

b. Keytone

1. Uplink / Amp
2. Downlink
3. Sidetone

c. Stream

1. Uplink / Amp
2. Stereo Left
3. Stereo Right

iv) HandsFree

a. Voice

1. Uplink / Amp
2. Downlink
3. Sidetone

b. Keytone

1. Uplink / Amp
2. Downlink
3. Sidetone

c. Stream

1. Uplink / Amp
2. Stereo Left
3. Stereo Right

v) SlideOff Receiver

a. Voice

1. Uplink / Amp
2. Downlink
3. Sidetone

b. Keytone

1. Uplink / Amp
2. Downlink
3. Sidetone

c. Stream

1. Uplink / Amp
2. Stereo Left
3. Stereo Right

vi) SlideOff Speaker

a. Voice

1. Uplink / Amp
2. Downlink
3. Sidetone

b. Keytone

1. Uplink / Amp
2. Downlink
3. Sidetone

c. Stream

1. Uplink / Amp
2. Stereo Left
3. Stereo Right

vii) Loopback Test

- a. Loopback ON
- b. Loopback OFF
- c. Loud Spk ON
- d. Loud Spk OFF

viii) AQI Control

- a. AEC
 - 1. AEC Mode
 - 1) AEC1.8 VAD+E5
 - 2) AEC1.8 VAD
 - 3) AEC2.0 Div enable
 - 4) AEC2.0 Div disable
 - 5) AEC disable
 - 2. AEC Custom
 - 3. AEC View
- b. ES Behavior
 - 1. Behavior 1
 - 2. Behavior 1a
 - 3. Behavior 2a
 - 4. Behavior 2b
 - 5. Behavior 2c
 - 6. Behavior 2c idle
 - 7. Behavior 3
 - 8. ES Disabled
 - 9. ES View
- c. ES Custom
 - 1. Mode, Gain
 - 2. TCL value
 - 3. Pwr, Timing
 - 4. DL vector
 - 5. UL vector
 - 6. ES View
- d. ANR
 - 1. ANR Setting
 - 2. ANR View
- e. IIR Filter
 - 1. IIR DL Setting1
 - 2. IIR DL Setting2
 - 3. IIR DL Setting3
 - 4. IIR UL Setting4
 - 5. IIR UL Setting5
 - 6. IIR UL Setting6
 - 7. IIR DL Disable
- f. Limiter
 - 1. Limiter Setting
 - 2. Limiter View

G. DRC

- 1. DRC configure 1
- 2. DRC configure 2
- 3. DRC configure 3
- 4. DRC configure 4
- 5. DRC configure 5
- 6. DRC configure 6
- 7. DRC disable

H. AGC

- 1. 8kHz, 20ms
- 2. 8kHz, 10ms
- 3. 16kHz, 20ms
- 4. 16kHz, 10ms
- 5. AGC disable

-) DVC Gain
-) Audio Info

8) FM Radio Test

- i) OnOff Test
 - a. FM Radio PowerUp
 - b. FM Radio PowerDown
 - c. FMSpeaker
 - d. FMHeadPhone
- ii) Tune Test
 - a. Tune 91.9MHz
 - b. Tune 103.5MHz
- iii) Seek Test
 - a. Seek Up
 - b. Seek Down
- iv) Volume Test
 - a. Volume Up
 - b. Volume Down
- v) FM RSSI level View
 - a. RSSI ON
 - b. RSSI OFF

9) Bluetooth Test

- i) Enter Test Mode
 - a. Audio Test
 - b. RF Test
- ii) Change BTS Script file
 - a. RF Test Mode
 - b. Normal Mode
 - c. Delete BTS Script file
- iii) OnOff Test
 - a. Bluetooth On
 - b. Bluetooth Off
- iv) BT Channel Test
- v) Activate PTS Test Mode
- vi) XHTML test

11. Engineering Mode

0) CS User Tendency

*) TCC Rom Version

3. KM500d Vers : KM500d Version Info.

4. Eng Mode : PS Info.

1) Cell Environ.

2) Location Info

3) Layer1 Info

5. Call Timer : Call Duration Info.

6. Factory default : Factory Reset

7. New Auto Test

8. GSM Band Test

1) GSM ALL BAND

2) GSM 850

3) GSM 900

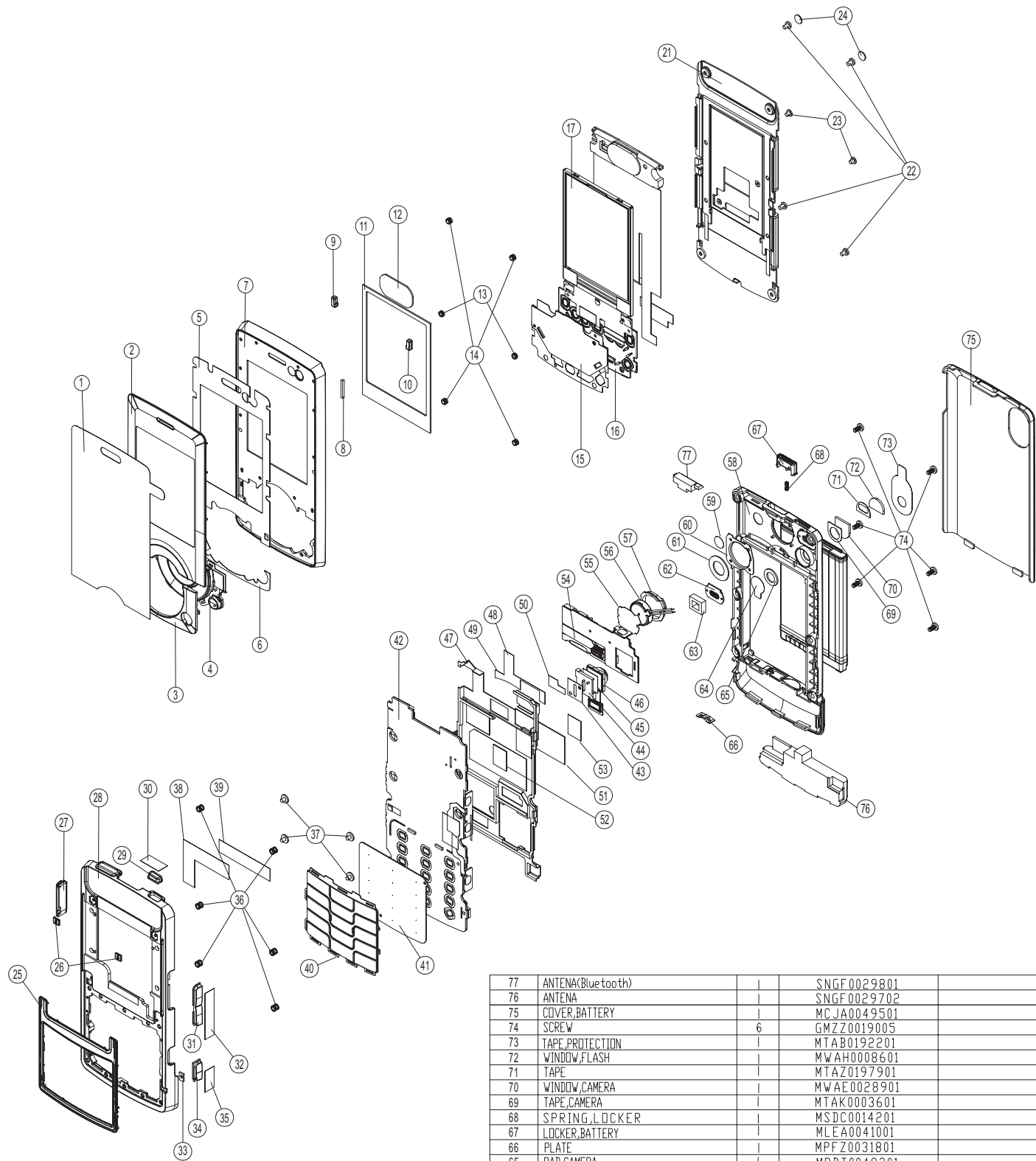
4) DCS 1800

5) PCS 1900

9. TCC Power

12. EXPLODED VIEW & REPLACEMENT PART LIST

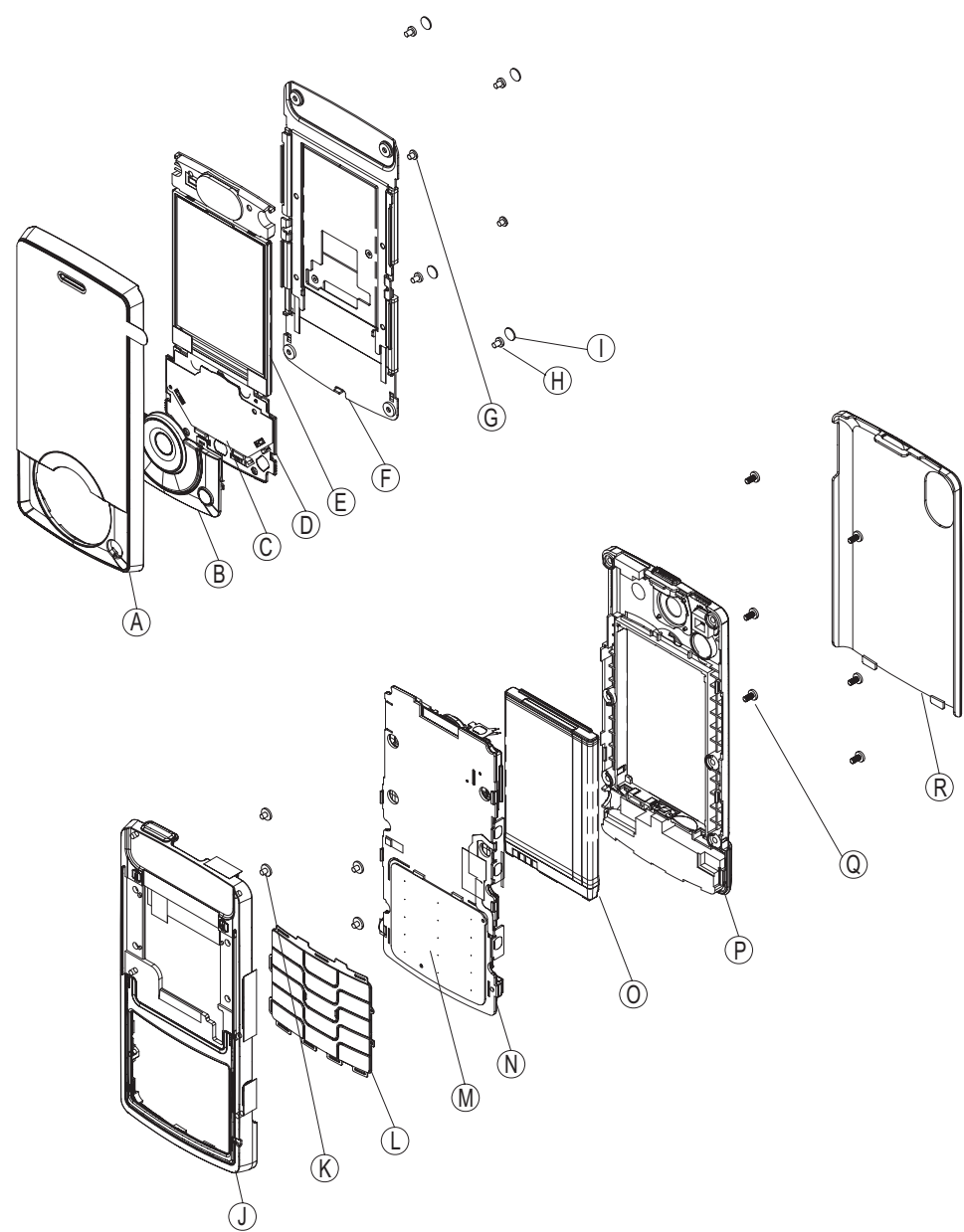
12.1 EXPLODED VIEW



77	ANTENA(Bluetooth)			SNGF0029801	
76	ANTENA			SNGF0029702	
75	COVER,BATTERY			MCJA0049501	
74	SCREW	6		GMZZ0019005	
73	TAPE,PROTECTION			MTAB0192201	
72	WINDOW,FLASH			MWAH0008601	
71	TAPE			MTAZ0197901	
70	WINDOW,CAMERA			MWAE0028901	
69	TAPE,CAMERA			MTAK0003601	
68	SPRING,LOCKER			MSDC0014201	
67	LOCKER,BATTERY			MLEA0041001	
66	PLATE			MPFZ0031801	
65	PAD,CAMERA			MPBT0048301	
64	TAPE,PROTECTION			MTAB0192301	
63	PAD,FLASH			MGAE0000701	
62	LENS,FLASH			MLCE0008301	

61	PAD,VIBRATOR			MPBJ0047801	
60	CAP,VIBRATOR			MPFZ0031801	
59	LABEL,A/S			MLAB0001102	
58	COVER,REAR			MCJN0072901	
57	BRACKET,MOTOR			MBFG0000601	
56	MOTOR				
55	TAPE			MTAZ0195201	
54	PCB				
53	RECYCLE MARK			MLAZ0040401	
52	PAD CAMERA CON			MPBU0019001	
51	LABEL			APEY0475601	
50	TAPE SHIELD #1			MTAC0063601	
49	TAPE SHIELD #2			MTAC0063602	
48	TAPE SHIELD #3			MTAC0063603	
47	CAN,SHIELD			MCBA0023201	
46	CAMERA				
45	TAPE			MTAZ0205801	
44	BRACKET,CAMERA			MBFP0008001	
43	TAPE			MTAZ0195301	
42	PCB, ASSY MAIN				
41	DOME ASSY, METAL			ADCA0071601	
40	KEYPAD ASSY, MAIN	2		AKAC0001601	
39	TAPE PROTECTION			MTAZ0198803	
38	TAPE, FPCB			MTAZ0198801	
37	SCREW	4		GMEY0017301	
36	INSERT	6		MICC0010001	
35	TAPE, PROTECTION			MTAB0209603	
34	BUTTON, CAMERA			MBJL0046401	
33	FILTER, MIKE			MFB00026401	
32	TAPE, PROTECTION			MTAB0209602	
31	BUTTON, SIDE			MBJL0046301	
30	TAPE, PROTECTION			MTAB0209603	
29	BUTTON, FUNCTION			MBJC0023201	
28	COVER, FRONT			MCJK0077201	
27	CAP, RECEPTACLE			MCCE0040201	
26	STOPPER			MSGY0022201	
25	DECO FRONT	2		MDAG0031101	
24	CAP, SCREW			MCCH0113801	
23	SCREW MACHINE	2		GMZZ0019003	
22	SCREW MACHINE	4		GMEY0010401	
21	COVER ASSY, SLIDE(LOWER)			ACGR0012701	
20	TAPE, ZIP CON			MTAB0197501	
19	SPEAKER				
18	FPCB				
17	LCD				
16	PCB ASSY, SLIDE				
15	DOME ASSY, METAL			ADCA0071401	
14	INSERT	4		MICE0002402	
13	INSERT	2		MICE0002401	
12	PAD, SPEAKER			MPBN0045101	
11	PAD, LCD			MPBG0067301	
10	STOPPER			MMAA0008101	
9	STOPPER			MSGY0022001	
8	MAGNET SWITCH			MMAA0008701	
7	COVER, SLIDE(UPPER)			MCJW0015201	
6	TAPE, DECO			MTAA0147001	
5	TAPE WINDOW			MTAD0074701	
4	BUTTON ASSY, SUB			ABGG0000801	
3	DECO FOLDER			MDAE0041901	
2	WINDOW, LCD			MWAC0084701	
1	TAPE, PROTECTION			MTAB0192101	
NO.	DESCRIPTION	Q'TY	DRAWING	NO.	REMARK

ASS'Y EXPLODED VIEW



R	COVER,BATTERY	1	MCJA0049501	
Q	SCREW	6	GMZZ0019005	
P	COVER ASSY,REAR	1	ACGM0096501	
O	BATTERY	1		
N	PCB ASSY,MAIN	1		
M	DOME ASSY,METAL	1	ADCA0071601	
L	KEYPAD ASSY,MAIN	1	AKAC0001601	
K	SCREW MACHINE	4	GMEY0017301	
J	COVER ASSY,FRONT	1	ACGK0095501	
I	CAP SCREW	2	MCCH0113801	
H	SCREW MACHINE	4	GMEY0010401	
G	SCREW MACHINE	2	GMZZ0019003	
F	COVER ASSY,SLIDE(LOWER)	1	ACGR0012701	
E	LCD	1		
D	PCB ASSY,SUB	1		
C	DOME ASSY,METAL	1	ADCA0071401	
B	BUTTON ASSY,SUB	1	ABGG0000801	
A	COVER ASSY,SLIDE(UPPER)	1	ACGS0014901	
NO.	DESCRIPTION	Q'TY	DRAWING NO.	REMARK

12. EXPLODED VIEW & REPLACEMENT PART LIST

12.2 Replacement Parts <Mechanic component>

Note: This Chapter is used for reference, Part order is ordered by SBOM standard on GCSC

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
3	MCJZ00	COVER	MCJZ0030501	1146*996*105_TDR_Reliance	Without Color	
3	MPAD00	PACKING,SHELL	MPAD0005804	PRINTING, (empty), , , ,	Without Color	
3	MPCY00	PALLET	MPCY0013701	COMPLEX, (empty), , , ,	Without Color	
3	MSCY00	SLEEVE	MSCY0001001	Deadspace Keeping Off_TDR_RLC	Without Color	
2	APEY00	PHONE	APEY0475603		Black Blue	51
3	ACGM00	COVER ASSY,REAR	ACGM0096501		Black	P
4	MCJN00	COVER,REAR	MCJN0072901	MOLD, PC LUPOY SC-1004A, , , ,	Black	58
4	MGAE00	GASKET,DUST	MGAE0000701	COMPLEX, (empty), , , ,	Black	63
4	MLAB00	LABEL,A/S	MLAB0001102	C2000 USASV DIA 4.0	White	59
4	MLCE00	LENS,FLASH	MLCE0008301	COMPLEX, (empty), , , ,	White	62
4	MLEA00	LOCKER,BATTERY	MLEA0041001	MOLD, PC LUPOY SC-1004A, , , ,	Black	67
4	MPBJ00	PAD,MOTOR	MPBJ0047801	COMPLEX, (empty), , , ,	Without Color	61
4	MPBT00	PAD,CAMERA	MPBT0048301	COMPLEX, (empty), , , ,	Without Color	65
4	MPFZ00	PLATE	MPFZ0031801	PRESS, STS, , , ,	Without Color	66,60
4	MSDC00	SPRING,LOCKER	MSDC0014201	MOLD, PC LUPOY HI-1002M, , , ,	Metal Silver	68
4	MSDD00	SPRING,PLATE	MSDD0007001	PRESS, STS, , , ,	White	
4	MTAB00	TAPE,PROTECTION	MTAB0192201	COMPLEX, (empty), , , ,	Without Color	73
4	MTAB01	TAPE,PROTECTION	MTAB0192301	COMPLEX, (empty), , , ,	Without Color	64
4	MTAK00	TAPE,CAMERA	MTAK0003601	COMPLEX, (empty), , , ,	Without Color	69
4	MTAZ00	TAPE	MTAZ0197901	COMPLEX, (empty), , , ,	Without Color	71
4	MWAE00	WINDOW,CAMERA	MWAE0028901	COMPLEX, (empty), , , ,	Without Color	70
4	MWAH00	WINDOW,FLASH	MWAH0008601	COMPLEX, (empty), , , ,	Without Color	72
4	SNGF00	ANTENNA,GSM,FIXED	SNGF0029702	3.0 ,-2.0 dBd,, ,internal, GSM900/1800/1900 ,; ,TRIPLE ,-2.0 ,50 ,3.0		76
4	SNGF01	ANTENNA,GSM,FIXED	SNGF0029801	3.0 ,-2.0 dBd,, ,internal, Bluetooth ,; ,SINGLE ,-2.0 ,50 ,3.0		77
3	ACGQ00	COVER ASSY,SLIDE	ACGQ0020901		Black	
4	ABGG00	BUTTON ASSY,SUB	ABGG0000801		Black	B,4
4	ACGK00	COVER ASSY,FRONT	ACGK0095501		Black	J
5	1	TAPE,PROTECTION	MTAB0209603	COMPLEX, (empty), , , ,	Without Color	35
5	MBJC00	BUTTON,FUNCTION	MBJC0023201	COMPLEX, (empty), , , ,	Black	29
5	MBJL00	BUTTON,SIDE	MBJL0046401	COMPLEX, (empty), , , ,	Black	34
5	MBJL01	BUTTON,SIDE	MBJL0046301	COMPLEX, (empty), , , ,	Black	31
5	MCCE00	CAP,RECEPTACLE	MCCE0040201	COMPLEX, (empty), , , ,	Black	27

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
5	MCJK00	COVER,FRONT	MCJK0077201	MOLD, PC LUPOY SC-1004A, , , ,	Black	28
5	MDAG00	DECO,FRONT	MDAG0031101	COMPLEX, (empty), , , ,	Black	25
5	MFBD00	FILTER,MIKE	MFBD0026401	COMPLEX, (empty), , , ,	Black	33
5	MICC00	INSERT,FRONT(UPPER)	MICC0010001	D2.2 L2.0 KURL 45	Gold	36
5	MSGY00	STOPPER	MSGY0022201	COMPLEX, (empty), , , ,	Black	26
5	MTAB00	TAPE,PROTECTION	MTAB0209602	COMPLEX, (empty), , , ,	Without Color	30,32
5	MTAB02	TAPE,PROTECTION	MTAB0209601	COMPLEX, (empty), , , ,	Without Color	
4	ACGR00	COVER ASSY,SLIDE(LOWER)	ACGR0012701		Black	F,21
5	ARDY00	RAIL ASSY,SLIDE	ARDY0003901		Black	
4	ACGS00	COVER ASSY,SLIDE(UPPER)	ACGS0014901		Black	A
5	MCJW00	COVER,SLIDE(UPPER)	MCJW0015201	MOLD, PC LUPOY SC-1004A, , , ,	Black	7
5	MDAE00	DECO,FOLDER(UPPER)	MDAE0041901	MOLD, PC LUPOY SC-1004A, , , ,	Black	3
5	MICE00	INSERT,NUT	MICE0002401	COMPLEX, (empty), , , ,	Without Color	12
5	MICE01	INSERT,NUT	MICE0002402	COMPLEX, (empty), , , ,	Without Color	14
5	MMAA00	MAGNET,SWITCH	MMAA0008701	COMPLEX, (empty), , , ,	Without Color	8
5	MPBG00	PAD,LCD	MPBG0067301	COMPLEX, (empty), , , ,	Black	11
5	MPBN00	PAD,SPEAKER	MPBN0045101	COMPLEX, (empty), , , ,	Black	12
5	MSGY00	STOPPER	MSGY0022001	COMPLEX, (empty), , , ,	Black	9
5	MSGY01	STOPPER	MSGY0022101	COMPLEX, (empty), , , ,	Black	
5	MTAA00	TAPE,DECO	MTAA0147001	COMPLEX, (empty), , , ,	Without Color	6
5	MTAD00	TAPE,WINDOW	MTAD0074701	COMPLEX, (empty), , , ,	Without Color	5
5	MTAZ00	TAPE	MTAZ0207101	COMPLEX, (empty), , , ,	Without Color	78
5	MWAC00	WINDOW,LCD	MWAC0088201	COMPLEX, (empty), , , ,	Without Color	
6	MWAC00	WINDOW,LCD	MWAC0097801	COMPLEX, (empty), , , ,	Without Color	
4	MCCH00	CAP,SCREW	MCCH0113801	COMPLEX, (empty), , , ,	Black	24
4	MLAZ00	LABEL	MLAZ0038303	PRINTING, (empty), , , ,	White	
4	MTAB00	TAPE,PROTECTION	MTAB0192101	COMPLEX, (empty), , , ,	Without Color	1
4	MTAB01	TAPE,PROTECTION	MTAB0197501	COMPLEX, (empty), , , ,	Without Color	20
4	MTAZ00	TAPE	MTAZ0198801	COMPLEX, (empty), , , ,	Without Color	38
4	MTAZ000	TAPE	MTAZ0198803	COMPLEX, (empty), , , ,	Without Color	39
4	MTAZ01	TAPE	MTAZ0198802	COMPLEX, (empty), , , ,	Without Color	

12.2 Replacement Parts

<Main component>

Note: This Chapter is used for reference, Part order is ordered by SBOM standard on GCSC

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
1		GSM(SLIDE)	TGLL0016613		Black Blue	
3	WSAY00	SOFTWARE,APPLICATION	WSAY0119201	KM500_MobileSync_080115		
2	APAY00	PACKAGE	APAY0106301	KM500d VIV Packing	Without Color	
6	BFAA00	FILM,INMOLD	BFAA0077901	; ,[empty] , , ,	Without Color	
4	GMEY01	SCREW MACHINE,BIND	GMEY0010401	1.4 mm,2 mm,MSWR3(FN) ,N ,+ ,NYLOK	Silver	H,22
4	GMEY02	SCREW MACHINE,BIND	GMEY0017301	1.4 mm,1.6 mm,SWCH18A ,B ,TRI , ; ,[empty] ,[empty] , , SWCH ,BLACK ,[empty] ,[empty]		K, 37
4	GMZZ01	SCREW MACHINE	GMZZ0019003	3.5 mm,1.5 mm,MSWR3 ,N ,+ ,- ,NYLOK Coating (ZnB-BLACK)	Black	G, 74,23
4	SACY00	PCB ASSY,FLEXIBLE	SACY0066501			
5	SACB00	PCB ASSY,FLEXIBLE,INSERT	SACB0041901	Slide LCD FPCB		
5	SACE00	PCB ASSY,FLEXIBLE,SMT	SACE0060701	Slide LCD FPCB		
6	SACC00	PCB ASSY,FLEXIBLE,SMT BOTTOM	SACC0039401	Slide LCD FPCB		
7	C101	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
7	C102	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
7	C103	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
7	R100	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
7	R101	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
7	VA101	VARIISTOR	SEVY0003801	18 V , ,SMD ,		
7	VA102	VARIISTOR	SEVY0003801	18 V , ,SMD ,		
6	SACD00	PCB ASSY,FLEXIBLE,SMT TOP	SACD0050501	Slide LCD FPCB		
7	CN101	CONNECTOR,BOARD TO BOARD	ENBY0025201	26 PIN,0.4 mm,ETC , ,H=0.9, Header		
7	CN102	CONNECTOR,BOARD TO BOARD	ENBY0025201	26 PIN,0.4 mm,ETC , ,H=0.9, Header		
7	CN103	CONNECTOR,BOARD TO BOARD	ENBY0042601	54 PIN,0.4 mm,ETC , , , , , .040MM ,[empty] ,MALE ,[empty] ,R/TP , ,		
6	SPCY00	PCB,FLEXIBLE	SPCY0124701	POLYI , mm,DOUBLE , ; , , , , , , , , ,		
4	SAEY00	PCB ASSY,KEYPAD	SAEY0059101			
5	SAEB00	PCB ASSY,KEYPAD,INSERT	SAEB0023501			
6	ADCA00	DOME ASSY,METAL	ADCA0071401		Without Color	C,15
5	SAEE00	PCB ASSY,KEYPAD,SMT	SAEE0026101			
6	SAEC00	PCB ASSY,KEYPAD,SMT BOTTOM	SAEC0024301			

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
7	C000	CAP,CERAMIC,CHIP	ECCH0005603	2.2 uF,10V ,K ,X5R ,TC ,1608 ,R/TP		
7	C001	CAP,CERAMIC,CHIP	ECCH0005603	2.2 uF,10V ,K ,X5R ,TC ,1608 ,R/TP		
7	C002	CAP,CERAMIC,CHIP	ECCH0000113	18 pF,50V,J,NP0,TC,1005,R/TP		
7	C003	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
7	C004	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
7	C005	CAP,CERAMIC,CHIP	ECCH0005603	2.2 uF,10V ,K ,X5R ,TC ,1608 ,R/TP		
7	C006	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
7	C007	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
7	C008	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
7	C009	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
7	C010	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
7	C011	CAP,CERAMIC,CHIP	ECCH0005603	2.2 uF,10V ,K ,X5R ,TC ,1608 ,R/TP		
7	C012	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
7	C013	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
7	C014	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
7	C015	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
7	CN000	CONNECTOR,BOARD TO BOARD	ENBY0025501	26 PIN,0.4 mm,ETC , ,H=0.9, Socket		
7	CN001	CONNECTOR,BOARD TO BOARD	ENBY0025501	26 PIN,0.4 mm,ETC , ,H=0.9, Socket		
7	CN002	CONNECTOR,FFC/FPC	ENQY0013901	35 PIN,0.3 mm,STRAIGHT , , , , ,0.30MM ,FPC ,STRAIGHT ,BOTH ,SMD ,R/TP ,[empty] ,		
7	FB000	FILTER,BEAD,CHIP	SFBH0000903	600 ohm,1005 ,		
7	FB001	FILTER,BEAD,CHIP	SFBH0000903	600 ohm,1005 ,		
7	FB002	FILTER,BEAD,CHIP	SFBH0000903	600 ohm,1005 ,		
7	R000	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
7	R001	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
7	R002	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
7	R008	RES,CHIP,MAKER	ERHZ0000464	330 ohm,1/16W ,J ,1005 ,R/TP		
7	R010	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
7	R012	RES,CHIP,MAKER	ERHZ0003001	30 Kohm,1/16W ,F ,1005 ,R/TP		
7	R013	RES,CHIP,MAKER	ERHZ0000414	120 Kohm,1/16W ,J ,1005 ,R/TP		
7	R015	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
7	R021	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
7	R022	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
7	R024	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
7	R026	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
7	R027	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		

Copyright © 2008 LG Electronics, Inc. All right reserved.
Only for training and service purposes

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
6	MPBU005	PAD,CONNECTOR	MPBU0019001	COMPLEX, (empty), , , , ,	Without Color	52
6	MTAC002	TAPE,SHIELD	MTAC0063603	COMPLEX, (empty), , , , ,		48
6	MTAC003	TAPE,SHIELD	MTAC0063601	COMPLEX, (empty), , , , ,	Without Color	50
6	MTAC004	TAPE,SHIELD	MTAC0063602	COMPLEX, (empty), , , , ,		49
5	ACMY00	CAMERA ASSY	ACMY0006401		Without Color	
6	ABFZ00	BRACKET ASSY	ABFZ0013001	CAMERA	Black	
7	MBFP00	BRACKET,CAMERA	MBFP0008001	COMPLEX, (empty), , , , ,	Without Color	45
7	MTAZ00	TAPE	MTAZ0195301	COMPLEX, (empty), , , , ,	Without Color	43
7	MTAZ01	TAPE	MTAZ0205801	COMPLEX, (empty), , , , ,	Without Color	
6	SVCY00	CAMERA	SVCY0015801	CMOS ,MEGA ,2M SS LSI 1/4" Sensor(8" Wafer)		
5	ADCA00	DOME ASSY,METAL	ADCA0071601		Without Color	M,41
5	SPKY00	PCB,SIDEKEY	SPKY0055201	POLYI , mm,DOUBLE , , , , , , , , , , ,		
4	SAFF00	PCB ASSY,MAIN,SMT	SAFF0155701			
5	MLAZ00	LABEL	MLAZ0038301	PID Label 4 Array	Without Color	
5	SAFC00	PCB ASSY,MAIN,SMT BOTTOM	SAFC0101201			
6	C100	CAP,CHIP,MAKER	ECZH0025920	1000 pF,16V ,K ,X7R ,HD ,0603 ,R/TP		
6	C101	CAP,CERAMIC,CHIP	ECCH0009506	27 pF,25V ,J ,NP0 ,TC ,0603 ,R/TP		
6	C104	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C105	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C106	CAP,CERAMIC,CHIP	ECCH0000109	8 pF,50V,D,NP0,TC,1005,R/TP		
6	C107	CAP,CERAMIC,CHIP	ECCH0000109	8 pF,50V,D,NP0,TC,1005,R/TP		
6	C108	CAP,CERAMIC,CHIP	ECCH0000110	10 pF,50V,D,NP0,TC,1005,R/TP		
6	C110	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C111	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C112	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C113	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C114	CAP,TANTAL,CHIP	ECTH0001903	22 uF,6.3V ,M ,L_ESR ,1608 ,R/TP		
6	C115	CAP,TANTAL,CHIP	ECTH0001903	22 uF,6.3V ,M ,L_ESR ,1608 ,R/TP		
6	C116	CAP,CERAMIC,CHIP	ECCH0000163	47 nF,10V,K,X5R,HD,1005,R/TP		
6	C117	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C118	CAP,CERAMIC,CHIP	ECCH0000151	4.7 nF,25V,K,X7R,HD,1005,R/TP		
6	C119	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C120	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C121	CAP,CERAMIC,CHIP	ECCH0007802	4.7 uF,10V ,M ,X5R ,TC ,1608 ,R/TP		
6	C122	CAP,CHIP,MAKER	ECZH0025920	1000 pF,16V ,K ,X7R ,HD ,0603 ,R/TP		
6	C123	CAP,TANTAL,CHIP	ECTH0004807	10 uF,10V ,M ,STD ,1608 ,R/TP , , , , [empty] , [empty] , , -55TO+125C , , [empty] , [empty] , [empty] , [empty]		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
6	C124	CAP,CERAMIC,CHIP	ECCH0005604	10 uF,6.3V ,M ,X5R ,TC ,1608 ,R/TP		
6	C125	CAP,CERAMIC,CHIP	ECCH0005604	10 uF,6.3V ,M ,X5R ,TC ,1608 ,R/TP		
6	C126	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C127	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C128	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C129	CAP,CHIP,MAKER	ECZH0001210	470 nF,10V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C130	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C131	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C132	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C133	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C134	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C135	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C136	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C137	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C138	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C139	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C140	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C141	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C142	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C143	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C144	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C145	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C146	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C147	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C148	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C149	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C150	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C151	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C152	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C153	CAP,TANTAL,CHIP	ECTH0005704	33 uF,10V ,M ,L_ESR ,2012 ,R/TP , , , [empty] , [empty] , [empty] , , [empty] , [empty] , [empty] , [empty]		
6	C154	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C200	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C201	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C202	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C203	CAP,CHIP,MAKER	ECZH0000822	1.5 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C204	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
6	C205	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C206	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C207	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C208	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C209	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C210	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C211	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C212	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C213	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C214	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C215	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C216	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C217	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C218	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C219	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C220	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C221	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C223	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C224	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C225	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C226	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C227	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C228	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C300	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	C301	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	C302	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C303	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C304	CAP,CERAMIC,CHIP	ECCH0000129	120 pF,50V,J,NP0,TC,1005,R/TP		
6	C305	CAP,CERAMIC,CHIP	ECCH0005604	10 uF,6.3V ,M ,X5R ,TC ,1608 ,R/TP		
6	C306	CAP,CERAMIC,CHIP	ECCH0000127	82 pF,50V,J,NP0,TC,1005,R/TP		
6	C307	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C308	CAP,CERAMIC,CHIP	ECCH0000127	82 pF,50V,J,NP0,TC,1005,R/TP		
6	C309	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C310	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C311	CAP,CERAMIC,CHIP	ECCH0000110	10 pF,50V,D,NP0,TC,1005,R/TP		
6	C312	CAP,CERAMIC,CHIP	ECCH0000129	120 pF,50V,J,NP0,TC,1005,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
6	C313	CAP,CERAMIC,CHIP	ECCH0003002	10000000 pF,10V ,Z ,Y5V ,HD ,2012 ,R/TP , , [empty] , [empty] , [empty] , [empty] , [empty] , 1.25 mm		
6	C314	CAP,CERAMIC,CHIP	ECCH0000287	680 nF,10V ,M ,X5R ,TC ,1608 ,R/TP		
6	C315	CAP,CERAMIC,CHIP	ECCH0000391	1 uF,50V ,Z ,Y5V ,HD ,2012 ,R/TP		
6	C316	CAP,CERAMIC,CHIP	ECCH00009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C317	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C318	CAP,CHIP,MAKER	ECZH0025917	47 pF,25V ,J ,NP0 ,TC ,0603 ,R/TP		
6	C400	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C401	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C402	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C403	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C404	CAP,CERAMIC,CHIP	ECCH0000195	3.9 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C405	CAP,CERAMIC,CHIP	ECCH0000161	33 nF,16V,K,X7R,HD,1005,R/TP		
6	C406	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C407	CAP,CERAMIC,CHIP	ECCH0000195	3.9 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C408	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C409	CAP,CHIP,MAKER	ECZH0000844	68 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C410	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C411	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C413	CAP,CERAMIC,CHIP	ECCH0000175	2.7 pF,50V ,B ,NP0 ,TC ,1005 ,R/TP		
6	C414	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C415	CAP,CERAMIC,CHIP	ECCH0000175	2.7 pF,50V ,B ,NP0 ,TC ,1005 ,R/TP		
6	C418	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C420	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C421	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C424	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C425	CAP,CHIP,MAKER	ECZH0000841	56 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C426	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C427	CAP,CERAMIC,CHIP	ECCH0000112	15 pF,50V,J,NP0,TC,1005,R/TP		
6	C428	CAP,CERAMIC,CHIP	ECCH00009216	22 pF,25V ,J ,X7R ,TC ,0603 ,R/TP		
6	C429	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C430	CAP,CHIP,MAKER	ECZH0025920	1000 pF,16V ,K ,X7R ,HD ,0603 ,R/TP		
6	C431	CAP,CERAMIC,CHIP	ECCH0000127	82 pF,50V,J,NP0,TC,1005,R/TP		
6	C432	CAP,CERAMIC,CHIP	ECCH0000180	3.3 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C433	INDUCTOR,CHIP	ELCH0001048	10 nH,J ,1005 ,R/TP ,PBFREE		
6	C435	CAP,CERAMIC,CHIP	ECCH0003002	10000000 pF,10V ,Z ,Y5V ,HD ,2012 ,R/TP , , [empty] , [empty] , [empty] , [empty] , [empty] , 1.25 mm		
6	C436	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
6	C437	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C438	CAP,CERAMIC,CHIP	ECCH0009216	22 pF,25V ,J ,X7R ,TC ,0603 ,R/TP		
6	C439	CAP,CERAMIC,CHIP	ECCH0000127	82 pF,50V,J,NP0,TC,1005,R/TP		
6	C440	CAP,CERAMIC,CHIP	ECCH0000701	1.2 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C442	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C443	CAP,CERAMIC,CHIP	ECCH0007802	4.7 uF,10V ,M ,X5R ,TC ,1608 ,R/TP		
6	C444	CAP,CERAMIC,CHIP	ECCH0007802	4.7 uF,10V ,M ,X5R ,TC ,1608 ,R/TP		
6	C500	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C501	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C502	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C503	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C504	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C505	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C506	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C507	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C508	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C509	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C510	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C511	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C512	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C513	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C514	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C515	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C516	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C517	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C518	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C519	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C520	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C521	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C522	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C523	CAP,CERAMIC,CHIP	ECCH0005604	10 uF,6.3V ,M ,X5R ,TC ,1608 ,R/TP		
6	C524	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C525	CAP,CERAMIC,CHIP	ECCH0007802	4.7 uF,10V ,M ,X5R ,TC ,1608 ,R/TP		
6	C526	CAP,CERAMIC,CHIP	ECCH0009216	22 pF,25V ,J ,X7R ,TC ,0603 ,R/TP		
6	C527	CAP,CERAMIC,CHIP	ECCH0009216	22 pF,25V ,J ,X7R ,TC ,0603 ,R/TP		
6	C528	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C529	CAP,CERAMIC,CHIP	ECCH0000146	1.8 nF,50V,K,X7R,HD,1005,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
6	C530	CAP,CERAMIC,CHIP	ECCH0000146	1.8 nF,50V,K,X7R,HD,1005,R/TP		
6	C531	RES,CHIP	ERHY0009526	4.7 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	C600	CAP,CERAMIC,CHIP	ECCH0006201	4.7 uF,6.3V ,K ,X5R ,TC ,1608 ,R/TP		
6	C601	CAP,TANTAL,CHIP	ECTH0004807	10 uF,10V ,M ,STD ,1608 ,R/TP , ; , , [empty] , [empty] , , -55TO+125C , , [empty] , [empty] , [empty] , [empty]		
6	C602	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C603	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C604	CAP,CERAMIC,CHIP	ECCH0009106	10 nF,16V ,K ,X7R ,TC ,0603 ,R/TP		
6	C605	CAP,CERAMIC,CHIP	ECCH0006201	4.7 uF,6.3V ,K ,X5R ,TC ,1608 ,R/TP		
6	C606	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C607	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C608	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C609	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C611	CAP,TANTAL,CHIP	ECTH0005202	100 uF,4V ,M ,L_ESR ,2012 ,R/TP , ; , , [empty] , [empty] , , [empty] , , [empty] , [empty] , [empty] , [empty]		
6	C612	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C613	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C614	CAP,TANTAL,CHIP	ECTH0005202	100 uF,4V ,M ,L_ESR ,2012 ,R/TP , ; , , [empty] , [empty] , , [empty] , , [empty] , [empty] , [empty] , [empty]		
6	C615	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C616	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C617	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C618	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C619	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C620	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C621	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C622	CAP,CHIP,MAKER	ECZH0025917	47 pF,25V ,J ,NP0 ,TC ,0603 ,R/TP		
6	C623	CAP,CHIP,MAKER	ECZH0025917	47 pF,25V ,J ,NP0 ,TC ,0603 ,R/TP		
6	C624	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C625	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C626	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C627	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C629	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C630	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C632	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C633	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C634	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C635	CAP,CERAMIC,CHIP	ECCH0005604	10 uF,6.3V ,M ,X5R ,TC ,1608 ,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
6	C636	CAP,TANTAL,CHIP	ECTH0005202	100 uF,4V ,M ,L_ESR ,2012 ,R/TP , , , [empty] , [empty] , [empty] , , [empty] , [empty] , [empty] , [empty] , [empty]		
6	C637	CAP,TANTAL,CHIP	ECTH0005202	100 uF,4V ,M ,L_ESR ,2012 ,R/TP , , , [empty] , [empty] , [empty] , , [empty] , [empty] , [empty] , [empty] , [empty]		
6	C638	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C639	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C700	CAP,TANTAL,CHIP	ECTH0004807	10 uF,10V ,M ,STD ,1608 ,R/TP , , , [empty] , [empty] , , -55TO+125C , , [empty] , [empty] , [empty] , [empty]		
6	C701	CAP,CERAMIC,CHIP	ECCH0009515	150 pF,25V ,K ,X7R ,HD ,0603 ,R/TP		
6	C702	CAP,CERAMIC,CHIP	ECCH0009216	22 pF,25V ,J ,X7R ,TC ,0603 ,R/TP		
6	C703	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C704	CAP,CERAMIC,CHIP	ECCH0009216	22 pF,25V ,J ,X7R ,TC ,0603 ,R/TP		
6	C800	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C801	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C802	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C803	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C805	CAP,CHIP,MAKER	ECZH0000841	56 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C806	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C807	CAP,CHIP,MAKER	ECZH0000841	56 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C808	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	CN300	CONNECTOR,I/O	ENRY0006401	18 PIN,0.4 mm,ANGLE , ,H=2.5, Reverse Type		
6	CN700	CONNECTOR,ETC	ENZY0019801	3 PIN, mm,ETC , ,3 PIN, 1.9 mm, ETC , ,Battery Connector		
6	CN800	CONNECTOR,BOARD TO BOARD	ENBY0042701	54 PIN,0.4 mm,ETC , , , ,0.40MM , [empty] , FEMALE ,SMD ,R/TP , ,		
6	CN801	CONNECTOR,BOARD TO BOARD	ENBY0020401	24 PIN,0.4 mm,ETC , ,H=0.9, Socket		
6	CN802	CONNECTOR,BOARD TO BOARD	ENBY0021001	24 PIN,0.4 mm,ETC , ,H=2.5		
6	FB300	FILTER,BEAD,CHIP	SFBH0000903	600 ohm,1005 ,		
6	FB301	FILTER,BEAD,CHIP	SFBH0000903	600 ohm,1005 ,		
6	FB302	FILTER,BEAD,CHIP	SFBH0008103	1000 ohm,1005 ,chip bead, 200mA,DCR0.9ohm , , , ,SMD ,R/TP		
6	FB303	FILTER,BEAD,CHIP	SFBH0008103	1000 ohm,1005 ,chip bead, 200mA,DCR0.9ohm , , , ,SMD ,R/TP		
6	FB304	FILTER,BEAD,CHIP	SFBH0008103	1000 ohm,1005 ,chip bead, 200mA,DCR0.9ohm , , , ,SMD ,R/TP		
6	FB305	FILTER,BEAD,CHIP	SFBH0008103	1000 ohm,1005 ,chip bead, 200mA,DCR0.9ohm , , , ,SMD ,R/TP		
6	FB306	FILTER,BEAD,CHIP	SFBH0008103	1000 ohm,1005 ,chip bead, 200mA,DCR0.9ohm , , , ,SMD ,R/TP		
6	FB800	FILTER,BEAD,CHIP	SFBH0000903	600 ohm,1005 ,		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
6	FL200	FILTER,DIELECTRIC	SFDY0002701	2450 MHz,2.5*2.0*1.2 ,SMD ,2400M~2500M, IL 3.3, 6pin, U-B, 50-100, BT BPF (TI BRF6300) , ,BPF ,2450 ,2.5*2.0*1.2 ,SMD ,R/TP		
6	FL400	FILTER,SEPERATOR	SFAY0011302	850 ,1800.1900 , dB, dB, dB,4532 ,GSM Triple band FEM		
6	FL800	FILTER,EMI/POWER	SFEY0013201	SMD ,1608 ,EMI-ESD Filter, 4ch, 14V, 15pF, 100ohm		
6	FL801	FILTER,EMI/POWER	SFEY0013201	SMD ,1608 ,EMI-ESD Filter, 4ch, 14V, 15pF, 100ohm		
6	FL802	FILTER,EMI/POWER	SFEY0013201	SMD ,1608 ,EMI-ESD Filter, 4ch, 14V, 15pF, 100ohm		
6	FL803	FILTER,EMI/POWER	SFEY0013201	SMD ,1608 ,EMI-ESD Filter, 4ch, 14V, 15pF, 100ohm		
6	FL804	FILTER,EMI/POWER	SFEY0013201	SMD ,1608 ,EMI-ESD Filter, 4ch, 14V, 15pF, 100ohm		
6	FL805	FILTER,EMI/POWER	SFEY0013201	SMD ,1608 ,EMI-ESD Filter, 4ch, 14V, 15pF, 100ohm		
6	FL806	FILTER,EMI/POWER	SFEY0013701	SMD ,18 V,4ch. EMI_ESD Filter (100 Ohm, 7.5pF)		
6	FL807	FILTER,EMI/POWER	SFEY0013201	SMD ,1608 ,EMI-ESD Filter, 4ch, 14V, 15pF, 100ohm		
6	J300	CONN,JACK/PLUG,EARPH ONE	ENJE0006601	4 ,4 PIN, , ,4P ,[empty] ,ANGLE ,[empty] , ,BLACK ,		
6	J700	CONN,SOCKET	ENSY0018701	6 PIN,ETC , ,2.54 mm,H=1.8		
6	L100	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L101	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L102	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L103	INDUCTOR,SMD,POWER	ELCP0009403	2.2 uH,M ,2.8*2.6*1 ,R/TP ,power inductor		
6	L200	INDUCTOR,CHIP	ELCH0004727	100 nH,J ,1005 ,R/TP ,		
6	L201	INDUCTOR,CHIP	ELCH0004707	1.5 nH,S ,1005 ,R/TP ,		
6	L202	INDUCTOR,CHIP	ELCH0004707	1.5 nH,S ,1005 ,R/TP ,		
6	L300	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L301	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L302	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L303	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L304	INDUCTOR,CHIP	ELCH0010402	270 nH,M ,1005 ,R/TP ,CHIP		
6	L305	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L400	INDUCTOR,CHIP	ELCH0001035	4.7 nH,S ,1005 ,R/TP ,PBFREE		
6	L401	INDUCTOR,CHIP	ELCH0005016	8.2 nH,J ,1005 ,R/TP ,		
6	L402	NOT ASSEMBLE	9999999999	NOT ASSEMBLE	Color Unfixed	
6	L403	INDUCTOR,CHIP	ELCH0004701	12 nH,J ,1005 ,R/TP ,		
6	L404	INDUCTOR,CHIP	ELCH0004727	100 nH,J ,1005 ,R/TP ,		
6	L405	INDUCTOR,CHIP	ELCH0004709	3.3 nH,S ,1005 ,R/TP ,		
6	L406	INDUCTOR,CHIP	ELCH0004723	1.8 nH,S ,1005 ,R/TP ,		
6	L407	INDUCTOR,CHIP	ELCH0004704	4.7 nH,S ,1005 ,R/TP ,		
6	L408	INDUCTOR,CHIP	ELCH0004704	4.7 nH,S ,1005 ,R/TP ,		
6	L409	INDUCTOR,CHIP	ELCH0001405	3.3 nH,S ,1005 ,R/TP ,PBFREE		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
6	L410	INDUCTOR,CHIP	ELCH0001405	3.3 nH,S ,1005 ,R/TP ,PBFREE		
6	L500	INDUCTOR,SMD,POWER	ELCP0008004	4.7 uH,M ,1 ,R/TP , , , , 0.3NH , , , , ,NON SHIELD ,2.5X2X1MM ,11MM ,R/TP		
6	L600	INDUCTOR,CHIP	ELCH0004727	100 nH,J ,1005 ,R/TP ,		
6	L601	INDUCTOR,CHIP	ELCH0004727	100 nH,J ,1005 ,R/TP ,		
6	L602	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L603	INDUCTOR,CHIP	ELCH0004727	100 nH,J ,1005 ,R/TP ,		
6	L604	INDUCTOR,CHIP	ELCH0004727	100 nH,J ,1005 ,R/TP ,		
6	MIC600	MICROPHONE	SUMY0010604	UNIT , -38 dB,4.72*3.76 ,1.25T Bottom Silicon type , , , ,UNI ,1.5V , ,SMD		
6	PT400	THERMISTOR	SETY0006501	NTC ,22000 ohm,SMD ,1005, ECTH 1005 Series, Pb Free		
6	Q100	TR,BJT,NPN	EQBN0004703	VMT3 ,150 mW,R/TP ,		
6	Q300	TR,BJT,NPN	EQBN0007101	EMT3 ,0.15 W,R/TP ,LOW FREQUENCY		
6	Q500	TR,FET,N-CHANNEL	EQFN0005201	SOT-323 ,.29 W,25 V,.7 A,R/TP ,N-Channel MOSFET, Pb free		
6	R100	RES,CHIP	ERHY0009505	10 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R101	RES,CHIP	ERHY0009505	10 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R102	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R103	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R104	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R106	RES,CHIP	ERHY0009560	33 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	R107	RES,CHIP	ERHY0009505	10 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R108	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	R109	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R110	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R112	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R113	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R114	RES,CHIP,MAKER	ERHZ0000445	220 Kohm,1/16W ,J ,1005 ,R/TP		
6	R115	RES,CHIP,MAKER	ERHZ0000465	3300 ohm,1/16W ,J ,1005 ,R/TP		
6	R116	RES,CHIP,MAKER	ERHZ0000465	3300 ohm,1/16W ,J ,1005 ,R/TP		
6	R117	RES,CHIP,MAKER	ERHZ0000404	1 Kohm,1/16W ,J ,1005 ,R/TP		
6	R118	RES,CHIP,MAKER	ERHZ0004201	121000 ohm,1/16W ,F ,1005 ,R/TP		
6	R119	RES,CHIP	ERHY0009504	1 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R121	RES,CHIP	ERHY0009505	10 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R124	RES,CHIP	ERHY0000128	15K ohm,1/16W,F,1005,R/TP		
6	R125	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R126	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R127	RES,CHIP,MAKER	ERHZ0000402	10 ohm,1/16W ,J ,1005 ,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
6	R128	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R201	RES,CHIP,MAKER	ERHZ0000529	1.5 Kohm,1/16W ,J ,1005 ,R/TP		
6	R202	RES,CHIP,MAKER	ERHZ0000437	2 Kohm,1/16W ,J ,1005 ,R/TP		
6	R203	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R204	RES,CHIP,MAKER	ERHZ0000486	47 Kohm,1/16W ,J ,1005 ,R/TP		
6	R206	RES,CHIP,MAKER	ERHZ0000485	4700 ohm,1/16W ,J ,1005 ,R/TP		
6	R300	RES,CHIP,MAKER	ERHZ0000245	220 Kohm,1/16W ,F ,1005 ,R/TP		
6	R301	RES,CHIP,MAKER	ERHZ0000404	1 Kohm,1/16W ,J ,1005 ,R/TP		
6	R302	RES,CHIP,MAKER	ERHZ0000486	47 Kohm,1/16W ,J ,1005 ,R/TP		
6	R303	RES,CHIP,MAKER	ERHZ0000203	10 Kohm,1/16W ,F ,1005 ,R/TP		
6	R304	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R305	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R307	RES,CHIP,MAKER	ERHZ0000459	3 Kohm,1/16W ,J ,1005 ,R/TP		
6	R308	RES,CHIP	ERHY0000248	2.4K ohm,1/16W,J,1005,R/TP		
6	R309	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R310	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R311	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R312	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R313	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R314	RES,CHIP	ERHY0009527	47 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R315	RES,CHIP	ERHY0009505	10 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R316	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R317	RES,CHIP	ERHY0009505	10 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R318	RES,CHIP	ERHY0009554	20 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	R319	RES,CHIP	ERHY0009505	10 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R320	RES,CHIP	ERHY0009554	20 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	R321	RES,CHIP	ERHY0009560	33 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	R322	RES,CHIP	ERHY0009505	10 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R400	RES,CHIP,MAKER	ERHZ0000486	47 Kohm,1/16W ,J ,1005 ,R/TP		
6	R401	RES,CHIP	ERHY0009504	1 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R402	RES,CHIP	ERHY0009543	120 ohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R403	RES,CHIP	ERHY0009503	100 ohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R404	RES,CHIP,MAKER	ERHZ0000490	51 ohm,1/16W ,J ,1005 ,R/TP		
6	R405	RES,CHIP,MAKER	ERHZ0000504	68 ohm,1/16W ,J ,1005 ,R/TP		
6	R406	RES,CHIP	ERHY0009543	120 ohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R407	RES,CHIP	ERHY0009503	100 ohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R408	RES,CHIP	ERHY0009503	100 ohm,1/20W(0.05W) ,J ,0603 ,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
6	R410	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		
6	R411	RES,CHIP,MAKER	ERHZ0000472	36 Kohm,1/16W ,J ,1005 ,R/TP		
6	R412	RES,CHIP	ERHY0009550	47 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	R502	RES,CHIP,MAKER	ERHZ0000485	4700 ohm,1/16W ,J ,1005 ,R/TP		
6	R503	RES,CHIP,MAKER	ERHZ0000485	4700 ohm,1/16W ,J ,1005 ,R/TP		
6	R504	RES,CHIP,MAKER	ERHZ0000486	47 Kohm,1/16W ,J ,1005 ,R/TP		
6	R505	RES,CHIP,MAKER	ERHZ0000486	47 Kohm,1/16W ,J ,1005 ,R/TP		
6	R506	RES,CHIP,MAKER	ERHZ0000486	47 Kohm,1/16W ,J ,1005 ,R/TP		
6	R509	RES,CHIP	ERHY0009505	10 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R510	RES,CHIP,MAKER	ERHZ0000486	47 Kohm,1/16W ,J ,1005 ,R/TP		
6	R511	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R512	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R513	RES,CHIP,MAKER	ERHZ0000486	47 Kohm,1/16W ,J ,1005 ,R/TP		
6	R515	RES,CHIP,MAKER	ERHZ0000323	91 Kohm,1/16W ,F ,1005 ,R/TP		
6	R516	RES,CHIP	ERHY0000161	200K ohm,1/16W,F,1005,R/TP		
6	R517	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R518	RES,CHIP	ERHY0009527	47 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R519	RES,CHIP	ERHY0009527	47 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R520	RES,CHIP	ERHY0009527	47 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R521	RES,CHIP	ERHY0009527	47 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R524	RES,CHIP,MAKER	ERHZ0000308	62 Kohm,1/16W ,F ,1005 ,R/TP		
6	R525	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R526	RES,CHIP	ERHY0009527	47 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R527	RES,CHIP	ERHY0009527	47 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R528	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R529	RES,CHIP	ERHY0000189	3.9 Kohm,1/16W ,F ,1005 ,R/TP		
6	R530	RES,CHIP	ERHY0009561	56 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	R531	RES,CHIP	ERHY0009561	56 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	R532	RES,CHIP	ERHY0009561	56 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	R533	RES,CHIP	ERHY0009561	56 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	R534	RES,CHIP	ERHY0009561	56 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	R535	RES,CHIP,MAKER	ERHZ0000404	1 Kohm,1/16W ,J ,1005 ,R/TP		
6	R536	RES,CHIP,MAKER	ERHZ0000467	330 Kohm,1/16W ,J ,1005 ,R/TP		
6	R538	RES,CHIP	ERHY0008502	2.7 Kohm,1/16W ,F ,1005 ,R/TP		
6	R539	RES,CHIP	ERHY0009505	10 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R540	RES,CHIP	ERHY0009526	4.7 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R541	RES,CHIP,MAKER	ERHZ0000486	47 Kohm,1/16W ,J ,1005 ,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
6	R604	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R605	RES,CHIP,MAKER	ERHZ0000402	10 ohm,1/16W ,J ,1005 ,R/TP		
6	R607	RES,CHIP,MAKER	ERHZ0000402	10 ohm,1/16W ,J ,1005 ,R/TP		
6	R608	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R609	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R614	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R700	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R701	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R702	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R703	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R704	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R705	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R706	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R707	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R708	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R709	RES,CHIP	ERHY0000261	10K ohm,1/16W,J,1005,R/TP		
6	R710	RES,CHIP,MAKER	ERHZ0000522	24 ohm,1/16W ,J ,1005 ,R/TP		
6	R800	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R801	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R802	RES,CHIP	ERHY0009554	20 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	SW400	CONN,RF SWITCH	ENWY0001801	STRAIGHT ,SMD ,2 dB,3000PCS/REEL		
6	U101	IC	EUSY0254701	DFN 3*3*0.9 ,10 PIN,R/TP ,Charger IC, I Max 1A, Wall Adaptor/USB Charger		
6	U102	IC	EUSY0266502	PBGA ,143 PIN,R/TP ,Triton, Analog Base Band		
6	U103	IC	EUSY0266401	PBGA ,293 PIN,R/TP ,Neptune, E-GPRS-MPU + C54x DSP		
6	U200	IC	EUSY0311701	uBGA ,63 PIN,R/TP ,Bluetooth Sigle-chip(v2.0+EDR),4.5x4.5x0.8		
6	U201	IC	EUSY0335802	FBGA ,107 PIN,ETC ,FULLY 1.8V 1G(128Mx8) NAND+512M(DDR/8Mx4x16) SDRAM ,; ,IC,MCP		
6	U202	IC	EUSY0355801	QFN ,20 PIN,R/TP ,FM Tuner(RDS), 3*3*0.55, Pb Free ,; ,IC Assembly		
6	U203	IC	EUSY0278501	SON5-P-0.50 ,5 PIN,R/TP ,INVERTER GATE, Pb Free		
6	U300	IC	EUSY0077701	SC70-5 ,5 PIN,R/TP ,1.8V Low Voltage Comparator with Rail-to-Rail Input, Pb Free		
6	U301	IC	EUSY0186502	Micropak ,6 PIN,R/TP ,Single SPDT Analog Switch, Pb Free		
6	U302	IC	EUSY0342401	WQFN16 ,16 PIN,R/TP ,Dual DPDT Analog Switch ,; ,IC,Analog Switch		
6	U303	IC	EUSY0319201	DFN ,10 PIN,R/TP ,OVP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
6	U304	IC	EUSY0338301	uMLP ,10 PIN,R/TP ,High Speed USB Siwitch 2.0 3.7pF 6.5ohm 1.4X1.8		
6	U305	IC	EUSY0340301	uMLP ,10 PIN,R/TP ,typ Rdson 0.4ohm, 1.4X1.8 ,; ,IC,Analog Switch		
6	U400	IC	EUSY0245902	DRL ,5 PIN,R/TP ,SINGLE,BUFFER,3STATE,1.7X1.7		
6	U401	IC	EUSY0245902	DRL ,5 PIN,R/TP ,SINGLE,BUFFER,3STATE,1.7X1.7		
6	U402	IC	EUSY0316801	BGA ,72 PIN,R/TP ,EDGE Tranceiver, 5X5 Size, B6PLD		
6	U403	PAM	SMPY0014901	dBm, %, A, dBc, dB, ,SMD ,; ,; ,; ,; ,; ,; ,; ,R/TP ,R/TP ,		
6	U404	IC	EUSY0345901	WDFN ,8 PIN,R/TP ,2X2 Dual LDO 2.8V/2.8V 300mA/300mA ,; ,IC,LDO Voltage Regulator		
6	U500	IC	EUSY0239302	HVSOF6 ,6 PIN,R/TP ,300mA CMOS LDO WITH OUTPUT CONTROL / 3.3V		
6	U501	IC	EUSY0246801	HVSOF6 ,6 PIN,R/TP ,300mA 2.8V LDO		
6	U502	IC	EUSY0264501	SC70JW-8 ,8 PIN,R/TP ,400mA, ADJ, DC/DC,PBFREE		
6	U503	IC	EUSY0342403	UDFN ,8 PIN,R/TP ,1.8X1.2,DFN ,; ,IC,Bus Controller		
6	U504	IC	EUSY0315701	BGA ,181 PIN,R/TP ,2M,MP3,USB2.0		
6	U600	IC	EUSY0232816	SON1612-6 ,6 PIN,R/TP ,3.0V ,150mA,LDO		
6	U601	IC	EUSY0340301	uMLP ,10 PIN,R/TP ,typ Rdson 0.4ohm, 1.4X1.8 ,; ,IC,Analog Switch		
6	U602	IC	EUSY0343501	CSP ,42 PIN,R/TP ,Audio CODEC with Class AB,D dual speaker driver, Dual DAC ,; ,IC,Audio Codec		
6	U603	IC	EUSY0340301	uMLP ,10 PIN,R/TP ,typ Rdson 0.4ohm, 1.4X1.8 ,; ,IC,Analog Switch		
6	U604	IC	EUSY0340301	uMLP ,10 PIN,R/TP ,typ Rdson 0.4ohm, 1.4X1.8 ,; ,IC,Analog Switch		
6	U800	IC	EUSY0223001	HVSOF5 ,5 PIN,R/TP ,150mA CMOS LDO WITH OUTPUT CONTROL / 1.5V		
6	U801	IC	EUSY0232812	SON1612-6 ,6 PIN,R/TP ,2.8V, 150mA LDO		
6	VA300	VARISTOR	SEVY0001001	14 V , ,SMD ,50pF, 1005		
6	VA301	VARISTOR	SEVY0001001	14 V , ,SMD ,50pF, 1005		
6	VA600	VARISTOR	SEVY0001001	14 V , ,SMD ,50pF, 1005		
6	VA705	VARISTOR	SEVY0005202	5.5 V ,+-30 ,SMD ,1005, 100 pF, Pb free		
6	X100	X-TAL	EXXY0004601	.032768 MHz,20 PPM,7 pF,65000 ohm,SMD ,6.9*1.4*1.3 ,		
6	X400	X-TAL	EXXY0019501	26 MHz,10 PPM,8 pF,50 ohm,SMD ,3.2*2.5*0.6 ,		
6	X500	X-TAL	EXXY0017801	12 MHz,50 PPM,8 pF,80 ohm,SMD ,3.2*2.5*0.75 ,20ppm at 25°C, 30ppm at -30°C ~ +85°C		
6	ZD300	DIODE,TVS	EDTY0009101	SOD-923 ,5 V,150 mW,R/TP ,1.0*0.6*0.4		
6	ZD301	DIODE,TVS	EDTY0009101	SOD-923 ,5 V,150 mW,R/TP ,1.0*0.6*0.4		
6	ZD800	DIODE,TVS	EDTY0009101	SOD-923 ,5 V,150 mW,R/TP ,1.0*0.6*0.4		
5	SAFD00	PCB ASSY,MAIN,SMT TOP	SAFD0100001			
6	C102	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		

12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
6	C103	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	LD700	DIODE,LED,CHIP	EDLH0013401	WHITE ,ETC ,R/TP ,SIDEVIEW LED ,; ,[empty] , , , , , ,[empty] ,[empty] ,2P		
6	LD701	DIODE,LED,CHIP	EDLH0013401	WHITE ,ETC ,R/TP ,SIDEVIEW LED ,; ,[empty] , , , , , ,[empty] ,[empty] ,2P		
6	R711	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R712	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R713	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R714	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R715	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R718	RES,CHIP,MAKER	ERHZ0000402	10 ohm,1/16W ,J ,1005 ,R/TP		
6	R719	RES,CHIP,MAKER	ERHZ0000402	10 ohm,1/16W ,J ,1005 ,R/TP		
6	SPFY00	PCB,MAIN	SPFY0170001	FR-4 ,0.8 mm,STAGGERED-8 ,; , , , , , , , , , ,		
6	U100	IC	EUSY0313401	QFN ,4 PIN,R/TP ,1.8X1.2X0.5 size wide input voltage Hall Switch		
6	VA700	VARISTOR	SEVY0005202	5.5 V,+30 ,SMD ,1005, 100 pF, Pb free		
6	VA701	VARISTOR	SEVY0005202	5.5 V,+30 ,SMD ,1005, 100 pF, Pb free		
6	VA702	VARISTOR	SEVY0005202	5.5 V,+30 ,SMD ,1005, 100 pF, Pb free		
6	VA703	VARISTOR	SEVY0005202	5.5 V,+30 ,SMD ,1005, 100 pF, Pb free		
6	VA704	VARISTOR	SEVY0005202	5.5 V,+30 ,SMD ,1005, 100 pF, Pb free		
3	SMZY00	MODULE,ETC	SMZY0017801	1GB / MICROSD / MLC 1 DIE ,; ,Module Assembly		

12.3 Accessory

Note: This Chapter is used for reference, Part order is ordered by SBOM standard on GCSC

Level	Location No.	Part Name	Part Number	Description	Color	Remrak
2	AAAY00	ADDITION	AAAY0257102		Black Blue	
3	ADEY00	DATA KIT	ADEY0007709	KM500 CD ASSY for Brazil vivo	Without Color	
4	MCHZ00	COMPACT DISK	MCHZ0046201	COMPLEX, (empty), , , , ,	Without Color	
3	MCJA00	COVER,BATTERY	MCJA0049501	CUTTING, AI, , , , ,	Black	R, 75
3	MMBB00	MANUAL,OPERATION	MMBB0238833	PRINTING, (empty), , , , ,	Without Color	
3	SBPL00	BATTERY PACK,LI-ION	SBPL0092901	3.7 V,800 mAh,1 CELL,PRISMATIC ,KM500 Latin America BATT, Pb-Free ,; ,3.7 ,800 ,0.2C ,PRISMATIC ,50x34x36 , ,BLACK ,Innerpack ,Latin America Label	Black	
3	SGDY00	DATA CABLE	SGDY0010904	; ,[empty] ,[empty] ,[empty] ,18 ,BLACK ,6.2mm Plug Databable ,[empty]		
3	SGEY00	EAR PHONE/EAR MIKE SET	SGEY0005537	, , , , , , , , , ,		
3	SSAD00	ADAPTOR,AC-DC	SSAD0024601	100-240V ,5060 Hz,5.1 V, .7 A,NOM ,AC-DC ADAPTOR ,; ,85Vac~264Vac ,5.1V +0.15V, -0.2V ,700mA ,5060 , ,WALL 2P ,I/O CONNECTOR ,		
		ADAPTOR,AC-DC	SSAD0024602	100-240V ,5060 Hz,5.1 V, .7 A,NOM ,AC-DC ADAPTOR ,; ,85Vac~264Vac ,5.1V +0.15V, -0.2V ,700mA ,5060 , ,WALL 2P ,I/O CONNECTOR ,		

Note
